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An analysis of outcomes associated with student participation in living-learning communities at the University of Massachusetts, Amherst.

Michael A. Gilbert
University of Massachusetts Amherst

AN ANALYSIS OF OUTCOMES ASSOCIATED WITH STUDENT PARTICIPATION IN LIVING-LEARNING COMMUNITIES AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST

A Dissertation Presented

by

MICHAEL A. GILBERT

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Approved as to style and content by:

Gary Malaney, Chair

David F. Schuman, Member

Harlan G. Sturm, Member

Andrew Effrat, Dean
School of Education

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ABSTRACT

AN ANALYSIS OF OUTCOMES ASSOCIATED WITH STUDENT PARTICIPATION IN LIVING-LEARNING COMMUNITIES AT THE UNIVERSTIY OF MASSACHUSETTS, AMHERST

MAY 2004

MICHAEL A. GILBERT, B.A., UNIVERSITY OF VERMONT

M.Ed., MICHIGAN STATE UNIVERSTIY

Ed.D. UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Gary D. Malaney

The purpose of this study was to assess the impact of student participation in the Special Interest Residential Program (SIRP) living-learning communities at the University of Massachusetts, Amherst.

This study involves a secondary data analysis of administrative data collected by SARIS, the Office for Academic Planning and Assessment, and the Department of Residence Life at the University of Massachusetts, Amherst. Data from the Fall Semester 2000 Residential Academic Programs survey and the Spring Semester 2002 Special Interest Residential Program survey are discussed. However, further analysis was conducted only on the latter data set.

The Residential Academic Program survey included 809 students who were enrolled in either the RAP, TAP or Honors living-learning community program at that time. The response rate was 59% (n=477). The Special Interest Residential Program survey included all 363 students who were involved in the SIRP living-learning programs, and 379 resident students. The response rate for sample students in a SIRP living-learning community was 84% (n=305).

Three broad research questions were posed in this study. The first found twenty-five positive outcomes associated with participation in all living-learning communities at the university. Three negative outcomes also were found. The second question found that participants in the more structured and academically oriented programs (RAP) derived different outcomes than students involved in the less structured programs (SIRP) that are not organized around an academic theme. The third question found that several subgroups within survey sample, including students of color, junior-year and first-year students in a SIRP derived different outcomes than their counterparts in a traditional residence hall setting.

These findings support the literature on living-learning community outcomes, and also suggest that residential learning communities represent one method of bridging the gap between students' in- and out-of-class experiences and with providing students with a seamless learning environment described in the literature. Moreover, this study suggests that positive outcomes can be derived from low-end living-learning community programs of various types. These findings suggest that campuses should develop living-learning community programs to support undergraduate student learning even if these structures are modestly designed and low cost.

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CHAPTER 1

INTRODUCTION

In their report on the state of American higher education the Wingspread Group (1993) summarized what they termed a "crisis of confidence" as follows:

> A disturbing and dangerous mismatch exists between what American society needs of higher education and what it is receiving. Nowhere is the mismatch more dangerous than in the quality of undergraduate preparation...What does our society NEED from higher education? It needs an informed and involved citizenry. It needs graduates able to assume leadership roles in American life...Above all it needs a commitment to the idea that all Americans have the opportunity to develop their talents to the fullest. Higher education is not meeting these imperatives. (p. 2-4)

Other critics of the current state of higher education point out that while college costs have increased dramatically over the past two decades, undergraduate education on many campuses is shortchanged by a system that rewards faculty more for their research and publications than for teaching and advising. Pazandak (1989) supported this perspective stating that "comprehensive, research universities achieve prominence and prestige primarily from faculty reputations in publication and research, levels of grant activity, and the accomplishments of their doctoral graduates" (p. 1-3). This is problematic, Pazandak argued, particularly when one considers the large numbers of undergraduates who attend such institutions across the country, and in light of the fact that public institutions have an obligation defined by their missions and funding source to provide the highest quality undergraduate education to their state's citizens.

Unfortunately, this view of the poor state of undergraduate education at some large universities appears to have credibility. In Astin's (1977, 1993) longitudinal studies of college students, for those who attended large universities, there were findings of low

student involvement on campus, little interaction with faculty, and lower likelihood of student achievement in the arts, leadership activities and athletics. Each of these factors contributes to the quality of the undergraduate education experience. Given these glaring shortcomings with the state of undergraduate education at large universities, leaders from within higher education have been called on to develop new pedagogical models to retain more students and help them succeed while in college, and to help them become life-long learners and productive citizens (Astin, 1993; Boyer, 1987; Boyer, 1988).

Many universities have responded to these challenges, in part, by creating living-learning communities on their campuses (Gabelnick, MacGregor, Matthews, & Smith, 1990; Lenning & Ebbers, 1999; Shapiro & Levine, 1999). In many cases, these communities are arranged to allow students with common academic interests to live together, enroll in classes together, and interact with faculty in the classroom and in social settings. Advocates for these programs suggest that this integration of a students' intellectual and social life enhances many aspects of the undergraduate experience and enriches learning. John Gardner, the Director of the National Resource Center for the First-Year Experience at the University of South Carolina has written,

> If I were to be asked what structural and pedagogical innovation currently being developed in American higher education may hold the greatest promise for improving first-year student academic performance and retention, I can now argue that it may well be the learning community (Gardner, 1999).

This perspective, seemingly, is validated through a growing body of research confirming that some learning communities help to integrate the curriculum, facilitate

student socialization, enhance academic performance, and increase retention rates (Pascarella & Terenzini, 1991; Smith, 1991; Tinto, 1998; Upcraft, et. al., 1989).

Undergraduate Education Studies and Policy Reports

The "movement" to create learning communities, as one means to improve student learning and enhance retention and graduation rates, emerged in the late 1980s in the wake of several longitudinal studies and numerous policy reports that called for the transformation of the undergraduate experience in American higher education (Gabelnick, et al., 1990; Lenning & Ebbers, 1999; Pike, 1997; Shapiro & Levine, 1999). In fact, Cross (1993) wrote that in one three year span during the mid-1980s more than thirty published national reports criticized and called for dramatic changes to improve the quality of undergraduate education. This study uses this literature as its context, but the reader should be aware that there are serious philosophical assumptions and possible flaws in that literature. Four of the reports that have had a significant influence on the development of living-learning communities as a means to enhance undergraduate education are summarized below.

Involvement in Learning: Realizing the Potential of American Higher Education (1984)

One of the first significant studies that promoted the value of creating learning communities was issued in 1984 by the National Institute of Education (NIE), U.S. Department of Education, which charged a study group to examine conditions of excellence in American higher education. The study group found that the rapid expansion of higher education that began after World War II and continued through the

1970s, followed by a period of diminishing resources, resulted in a gap between society's expectations higher education and the "realities of student learning, curricular coherence, facilities, faculty morale, and academic standards" (p. 8). They wrote that

> enrollments have risen nearly 400 percent since 1950, the number of America's colleges and universities increased only 60 percent. This means that more and more students attend large institutions. Since 1970, the average headcount enrollment of all of these institutions has expanded by 25 percent. Unfortunately, the greater the size of institutions, the more complex and bureaucratic they tend to become, the fewer the opportunities for each student to become intensely involved with intellectual life, and the less personal the contact between faculty and students. (p. 12)

The study group suggested that higher education needed dramatic change and that "educational excellence must be couched in terms of student outcomes—principally such academic outcomes as knowledge, intellectual capacities, and skills" (p. 16). Other outcomes such as persistence, leadership, social responsibility, and understanding of cultural and intellectual differences were also mentioned in the report.

The authors described three conditions of excellence: student involvement, high expectations and assessment, which Astin (1996) wrote constituted a "mini-theory of how students learn most effectively at the undergraduate level" (p.124). Student involvement, which refers to the amount of time and energy that students invest in the learning process, was considered to be the cornerstone condition by the authors.

The study group offered twenty-seven recommendations to enhance undergraduate education, the first of which was to "front-load" resources into more and improved teaching and academic support services for first-and second-year students. They also advocated for active modes of teaching that require greater student involvement and responsibility in their learning. They promoted the use of new technology to increase the amount of personal contact between students and faculty on

intellectual issues, and they recommended that "every institution of higher education should strive to create learning communities, organized around specific intellectual themes or tasks" (p.35). The report also emphasized that learning community experiences were even more important in larger institutions, "where students have a great need for meaningful academic identities" (p.).

Effective learning communities were characterized as having the following attributes (p. 35). They (a) offer a smaller unit than most other communities on campus, (b) have a sense of purpose, (c) provide a way to overcome the isolation of faculty members with one another and their students, (d) encourage faculty to relate to each other as both specialists and educators, (e) encourage continuity and integration in the curriculum, and (f) help to build a sense of group identity, cohesion, and "specialness."

College: The Undergraduate Experience in America (1987)

In the late 1980s the Carnegie Foundation for the Advancement of Teaching supported a study to evaluate the undergraduate experience in American colleges and universities. In this study, sixteen observer-reporters were sent to twenty-nine colleges and universities in the Fall semester 1984. The campuses were selected to "represent the full spectrum of institutional types--liberal arts colleges, comprehensive colleges, doctoral-granting institutions, and research universities" (Boyer, 1987, p. xii). Observers spent two weeks at each institution observing both the academic and social life of the campus, and interviewing administrators, faculty and students.

The study found that there were "inadequate connections between what high school students were taught and what colleges expected, between the academic and

social lives of students, between the campus and the world" (Coye, 1997, p 21.). The report also suggested that these and many other problems in higher education persist because of the "fragmented nature" of the college experience (Coye, 1997; Lenning & Ebbers, 1999; Shapiro & Levine, 1999).

Ernest Boyer, the president of the Carnegie Foundation at the time of this study and the author of the report, wrote that there were eight points of tension that were problematic for American higher education:

> the transition from school to college, the goals and curriculum of education, the priorities of the faculty, the condition of teaching and learning, the quality of campus life, the governing of the college, assessing outcomes, and the connection between campus and the world. (p. 6)

Boyer's (1987) response to the sense of fragmentation and disconnection in higher educations was to make "connections." He wrote "all parts of campus life—recruitment, orientation, curriculum, teaching, residence hall living, and the rest—must relate to one another and contribute to a sense of wholeness" (p. 8). These connections were considered vital to make college a more satisfying and intellectually significant experience for students. In particular, he suggested that higher education needed to find a way to balance community with individualism; create an institution where the curricular and co-curricular are two aspects of a single mission; design a curriculum that is rooted in an integrated core where students are introduced to the connections across disciplines as well as the essential knowledge within disciplines (p.91).

Campus Life: In Search of Community (1990)

In 1989, the Carnegie Foundation for the Advancement of Teaching, in cooperation with the American Council on Education and the National Association of

Student Personnel Administrators, launched a study on the quality of undergraduate student life in American higher education. The presidents and chief student affairs officers at over 2500 colleges and universities with undergraduate programs and with total enrollments of 300 or more students were included in the survey. The study found that the conditions on many campuses contradicted the development of an appropriate social and academic community, and that college officials have a deep concern about (a) student conduct, (b) alcohol and drug use, (c) campus crime, (d) civility, (e) prejudice and discrimination, and (f) disconnection between in-class and out-of-class activities. Despite the fact that good work was being done on many campuses to address these issues, the report argued that a more integrative vision of community in higher education[was needed], one that focuses not on the length of time students spend on campus, but on the quality of the encounter, and relates not only to social activities, but to the classroom, too. The goal as we see it is to clarify both academic and civic standards, and above all, to define with some precision the enduring values that undergird a community of learning. (p. 7)

The report highlighted six principles that were intended to "provide an effective formula for day-to-day decision making on the campus and, taken together define the kind of community every college and university should try to be" (p. 7). The principles included, striving to become (a) an educationally purposeful community where faculty and students share goals and work together, (b) an open community where expression is protected and civility is affirmed, (c) a just community where rights are protected and diversity is pursued, (d) a disciplined community where responsibilities are understood and enforced, (e) a caring community where all members are supported and service is

encouraged, (f) a celebrative community where rituals affirming both tradition and change are shared.

Returning to Our Roots: The Student Experience (1997)

In their 1997 report the Kellogg Commission, a group comprised of twenty-five current or former presidents of a state or land grant institution, challenged the National Association of State Universities and Land Grant Colleges to accept a new leadership role in American higher education. According to the report, public colleges and universities faced new challenges including, "an emerging enrollment boom, new competitors on the horizon, constrained public funding and growing resistance to price hikes, eroding public trust, and limited institutional flexibility"(p.v). They argued that the challenges facing state and land grant institutions were not "technical" issues such as how to allocate revenue and resources, but were "adaptive" issues of how to "lead when conditions are constantly changing, resources are tight, expectations are high, and options are limited"(p. v).

The Kellogg Commission Report (1997) recommended that three broad ideals be adopted to guide the change that is required, including (a) state and land grant institutions must become genuine learning communities that support faculty, staff, and learners of all kinds, (b) these learning communities should be student-centered and committed to meeting the needs of learners, and (c) these communities should emphasize the importance of a healthy learning environment that provides all participants with the facilities, support and services they need to succeed.

In service to these three ideals, the authors suggested that state and land grant universities must (a) focus more on learning than on teaching (p.20), supplement teaching based on classroom lectures with teaching emphasizing collaborative learning (pp.21-22), and develop residential environments that encourage learning.

In summary, these four reports have contributed to the "movement" in American higher education to create learning communities as one strategy to enhance undergraduate education. While each of these reports studied a different aspect of higher education and they spanned a thirteen-year period, when many significant changes were occurring within higher education, several compelling themes emerge in this literature.

The first theme concerns the quality of undergraduate education. These reports suggested that there is gap between what society and individual students need from an undergraduate education and what they are receiving, and they suggest that undergraduate education must improve dramatically (Astin, 1984; Boyer, 1987). Astin (1984) argued that undergraduate education needed to be transformed and that institutional performance should be judged ultimately in terms of how effectively students were educated, and that all institutions should be required to use assessment methods for demonstrating their effectiveness. Boyer (1987) suggested that educators "must continue to search for ways to evaluate their work. They must seek constructive and credible means for public accountability related closely to their purposes" (p. 262). He also cautioned that if institutions of higher education fail to articulate their mission and goals, become more knowledgeable about the students and their growth, more thoughtful about the coherence of their academic programs, and more serious with their

responsibility for evaluation, then "major decisions will be taken our of their hands" (p. 262).

The reports also highlighted the need to shift the focus in undergraduate education from "teaching" to "student learning" (Astin, 1984; Boyer, 1987; Boyer, 1990; Kellogg Commission,1997). Pascarella and Terenzini (1991) noted that the predominant method of teaching, even at small liberal arts colleges, was still lecturing. This model of instruction places the focus on teaching rather than learning, "which has an adverse effect on the amount and quality of intentional student learning...and teaching is hardly ever assessed in terms of...student learning and development" (Astin, 1993, p. 421). In the "student learning" model the purpose is not to only transfer knowledge through structured lectures, but to "create environments and experiences that bring students together to discover and construct knowledge for themselves, to make students members of communities of learners" (Barr & Tagg, 1995, p.15). Several of the reports discussed student involvement in learning activities, and how the students' level of responsibility for learning tends to increase in these learning community environments (Astin, 1984; Boyer, 1987; Kellogg Commission, 1997).

Each of these studies acknowledged that learning is a social process, and that learning is enhanced through meaningful contact with peers and faculty. They recommended that institutions create more opportunities for intentional faculty and student contact (Astin, 1984; Boyer, 1987; Boyer 1990; Kellogg Commission, 1997).

Finally, several reports emphasized that universities, in particular, needed to create smaller communities within the larger institution to meet students' needs for meaningful interpersonal relationships and experiences (Astin, 1984; Boyer 1990;

Kellogg Commission (1997), and they also emphasized that residentially-based learning communities, or living-learning communities, as they are commonly called today, represent an outstanding opportunity for institutions to address many of issued raised in their reports.

These four reports offered an extensive review of some of the problems that have existed with undergraduate education at many campuses over the past twenty years. They advocated for changes, such as shifting the focus from teaching to student learning, and becoming more student-centered with all aspects of work in the academy. These reports also discussed how the creation of learning communities that emphasize academically purposeful contact with peers, promote interaction with faculty, and make a large institution seem more like a smaller community, can promote student learning.

Emphasis on Community

Each of the reports discussed herein emphasized the importance of a community experience in enhancing undergraduate education in large universities. This is not surprising as Gardner (1989) wrote that "where community exists it confers upon its members identity, a sense of belonging, and a measure of security" (p. 73), and each of these qualities can serve as powerful influences with student learning. Astin (1993) noted that the ideal conditions for learning occur in small, residential, liberal arts colleges, because "students in similar circumstances and with common needs and interests [are] afforded an opportunity to interact and learn together" (p. 415). In such settings students enjoy greater opportunities to develop social relationships and

friendships outside of the classroom, and the development of a peer group facilitates student involvement and commitment to the institution.

However, in higher education today a small and decreasing segment of the higher education student population is educated in these traditional, small-college settings (Astin, 1993). The majority of college students are educated in large institutions, specifically community colleges and state colleges and universities, each of which offer a highly diverse curriculum. These institutions enroll large numbers of adult, commuter, transfer and part-time students, and Astin (1993) suggested that this diversity of interests, personal circumstances, and "especially in age seemingly makes is more difficult for students in large institutions to identify with each other and form common bonds" (p. 416). Therefore, while educators may tout the virtues and benefits of having such diversity in the classroom, in reality at times it may impede the creation of peer groups and inhibit the type of interactions that enhances student involvement unless there is a unifying experience they share, such as that provided in a living-learning experience (Astin, 1993).

There also is considerable research suggesting that since the early 1970s, college students have steadily become more self-centered and isolated than their predecessors. Newman (1985) wrote that the annual "ACE-UCLA survey shows a fifteen year decline in expectation and participation in the political life of the community, in any form of altruism, or of concern for the interests of others" (p. 37). During this period incoming college freshmen expressed less interest in (a) developing a philosophy of life, (b) participating in community affairs, (c) cleaning up the environment, and (d) promoting racial understanding. These same students expressed an increasing interest in values

associated with "money, status and power" (Newman, 1985, p. 37) including (a) being well off financially, (b) being an authority, (c) having administrative responsibilities for others, and (d) obtaining recognition.

Putnam's (2000) research suggested that this shift in values, particularly those relating to political interest and civic involvement among college students, may be one example of a larger social change that occurred in America during the last third of the twentieth century. Putnam (2000) argued that four primary factors including (a) pressures of time and money, including the special pressures on two-career families, contributed measurably to the diminution of our social and community involvement, (b) suburbanization, commuting, and sprawl, (c) the effect of electronic entertainment—above all television—in privatizing our leisure time, and (d) most importantly, generational change—the slow, steady, and ineluctable replacement of the long civic generation by their less involved children and grandchildren, has led to a significant decline in civic engagement and the creation of social capital in American society over the past forty years.

Bellah (1996) argued that Putnam's (1995, 2000) thesis on the crisis of civic membership and declining social capital appeared to be credible as follows,

> The argument for decline in social capital is not one that we made in Habits of the Heart…We worried that the language of individualism might undermine civic commitment, but we pointed to the historically high levels of associational membership in America and the relative strength of such memberships compared with other advanced industrial nations. Whether there has really been such a decline is still controversial, but we are inclined to believe that tendencies that were not entirely clear in the early 1980s when Habits was written are now discernible and disconcerting. (p. 261)

Putnam's (2000) research on social capital demonstrated that social networks, or community involvement, have a value that affects the productivity of individuals and groups. He wrote:

> Just as a screwdriver (physical capital) or a college education (human capital) can increase productivity (both individual and collective), so too social contacts affect the productivity of individuals and groups. Whereas physical capital refers to physical objects and human capital refers to properties of individuals, social capital refers to the connections among individuals—social networks and the norm or reciprocity and trustworthiness that arise from them. (p.19)

Putnam (2000) argued that these social connections and the increased levels of reciprocity and trustworthiness that arises from them, allow citizens to resolve collective problems more easily, allow communities to advance more smoothly, and improves the quality of life for each member as they come to understand and appreciate how their fates are linked to others. Putnam's research also suggested that social capital "operates through psychological and biological process to improve individual's lives, as there is mounting evidence suggesting that people whose lives are rich in social capital cope better with traumas and fight illnesses more effectively" (p. 287).

Putnam (2000) wrote that his study demonstrated that the bonds of our communities have withered and that the associated decline in social capital has real costs. He argued that one significant cost is that Americans today "feel vaguely and uncomfortably disconnected" and they are expressing a desire to live "in more civil, more trustworthy, and a more collectively caring community" (p. 402). Interestingly, this finding appears to be supported in Bellah's (1985) study on American individualism which suggested that "few have found a life devoted to "personal ambition and consumerism" satisfactory, and most are seeking in one way or another to transcend the

limitations of a self-centered life." (p. 290) Putnam (2000) concluded his study by offering a series of recommendations that were intended to "renew our stock in social capital" and "restore American community for the twenty-first century through both collective and individual initiative"(p.403).

Interestingly, Putnam (2000) emphasized participation in extracurricular activities, involvement in community service programs, and the creation of smaller schools, or "schools within schools" as strategies to create social networks and promote the civic engagement of students. Putnam (2000) wrote that smaller schools, "like smaller towns, generate higher expectations for mutual reciprocity and collective action. So deconcentrating megaschools or creating smaller "schools within schools" will almost surely produce civic dividends" (p. 405).

In their study on learning communities, Strange and Banning (2001) wrote that "a recurrent interest in the importance of community has emerged recently within society in general and within higher education in particular" (p. 159). In a brief discussion of the prominence of the concept of community in the literature on higher education reform, Strange and Banning (2001) referenced Palmer (1987) who suggested that the conversation about the place of community in higher education went as follows,

> First, there has been a collapse of civic virtue in the society around us, a collapse into expressive and competitive individualism, and a loss of integrated vision. This view was articulated for us most recently by the work of Robert Bellah and his colleagues in Habits of the Heart.
>
> Second, the argument runs, higher education can and should respond to this collapse by becoming a model community in at least two ways one is to develop new—cooperative social forms for campus life (i.e., in dormatory classroom life, where habits can be formed). Second, higher education should reorganize curricula toward a more integrated vision of the world offer more interdisciplinary studies, and do more ethical and value-oriented work. (p. 20)

Palmer (1987) acknowledged that higher education needed "a way of thinking about community that relates it to the central mission of the academy—the generation and transmission of knowledge" (p. 20). He also argued that "community must become a central concept in ways we teach and learn" because "knowing and learning are communal acts. They require a continual cycle of discussion, disagreement and consensus over what has been and what it all means" (p. 21).

Strange and Banning (2001) also cited a report by the Carnegie Foundation for the Advancement of Teaching, 1990 that argued

> The academic and social divisions that characterize the modern campus create a special need for common purposes to give meaning to the enterprise. And while higher education has a wide range of priorities to pursue, we are convinced that all parts of campus life can relate to one another and contribute to a sense of wholeness. It is of special significance, we believe, that higher learning institutions, even the big, complex ones, continue to use the familiar rhetoric of "community" to describe campus life… (p. 64)

Strange and Banning (2001) wrote that the image of community

> has become deeply embedded in our views of powerful educational environments, and for good reasons. The concept of community contains all the essential features associated with effective educational environments, as unifying purposes and values, traditions and symbols of belonging and involvement, and mutuality of care, support, and responsibility encourage a synergy of participation and worth, checking and cross-checking, to create a positive human learning environment. (p. 160)

They also argued that educational environments are most powerful when they offer inclusion and safety, and involve participants in significant and meaningful roles. These environments tend to fulfill two primary conditions for promoting learning, growth, and development: a sense of belonging and security and a mechanism for active engagement, and they suggested that if "the learning potential of any environment is to

be realized, third and more complete condition is proposed: the experience of full membership in the learning setting. This last condition is present most powerfully in an environment that is characterized by the dimension of community" (Strange and Banning, 2001, p. 159).

Clearly, there is great interest in learning communities because they "fit into a changing philosophy of knowledge...and [they] fit with what research tells us about learning" (Cross, 1998, p. 4). This literature suggests that living-learning communities may also work because they can serve an individual student's need to establish meaningful social networks with others in the university. In those cases when a positive community and social capital develops, students may derive the many benefits discussed in Putnam's (2000) work. Therefore, it is not surprising that many universities have responded to the criticism of the quality of undergraduate education, in part, by creating living-learning communities on their campuses.

Problem with Living-Learning Communities

Current literature on learning communities suggests that these programs vary greatly; from highly structured models that provide an integrated curriculum, promote increased faculty-student contact, and deliver specialized services to students on-site, to less structured programs that provide opportunities for students to meet informally to review and discuss academic and social concerns and interests. The fact that these programs are all referred to as learning communities, and the possibility that they are implemented with differing degrees of success, raises several significant research questions. In their review of the literature, Lenning and Ebbers (1999) examined

research on the impact of different learning community models and concluded: " Well-designed learning communities emphasizing collaborative learning result in improved GPA, retention, and satisfaction for undergraduate students" (p. 51). They also wrote that "learning communities of various kinds and in different institutional contexts that emphasize collaborative teaching and learning help undergraduates students—older as well as younger, remedial, regular, and honors, commuter as well as residential—in various ways" (p. 51). However, it is not made clear in Lenning and Ebbers'(1999) writing, or in other current literature on the topic, whether the positive results attributed to learning communities is primarily the result of the more structured models, or if similar positive results can be attributed to less structured programs (Stassen 2003).

Lindblad (2000) suggested that most of the research on learning community outcomes has involved "higher-end" more resource-dependent programs that often incorporate an integrated curricula, frequent faculty-student contact, and on-site academic services. The reality is that many campuses cannot support these more expensive program models, and that has resulted in the development of more modest learning communities. For this reason it is important to study the full range of learning community models to determine the extent to which less formal and less resource-dependent programs can achieve desired student outcomes similar to those that are possible for the more structured and more expensive programs (Stassen, 2003).

Further research is also needed on the full range of learning community programs on individual campuses and across institutions. This is because "some of the most positive and widely disseminated results on the impact of learning communities are derived from data that did not include a full sampling of the learning communities on the

campus studied." (Stassen, 2003, p. 586) For example, Tinto, Love, and Russo (1994) described their selection methodology in one study as follows: "In each institution, we selected a sample of learning communities that in the view of the program staff best captured the intent of their program" (p.3). This methodology raises two significant questions: a) Would the results of this study been different had the sample included the full range of learning communities? and b) Are the positive outcomes generally attributed to learning communities actually the result of a small number of model programs that receive the most attention and support, and not the full range of programs that actually exist on the campuses studied? (Stassen, 2003) It is plausible that the findings on student outcomes would be substantially different, in some cases, if the study had included all learning communities that existed on the campuses involved.

Living-Learning Communities at the University of Massachusetts, Amherst (UMass)

UMass provides an ideal environment in which to broaden the scope of what is known about living-learning communities. The university has supported a large and diverse group of programs on its campus for over twenty-five years, and each year nearly two thousand students elect to reside and participate in these programs. These programs are organized into two distinct categories—Residential Academic Programs and Special Interest Residential Programs.

Residential Academic Programs

The Residential Academic Programs are structured to provide students with the opportunity to live with a small group of students who share their academic interests.

Students are required to enroll in classes and participate in a variety of academic activities with others who live in their residence hall. These academic living-learning communities include the following three programs.

Residential Academic Programs (RAP). RAP is an academic unit that has existed on the UMass campus for over twenty years, and serves as the model on which the more recent academic living-learning community programs are based. RAP participants live together in groupings of twenty-five to fifty students and are enrolled in a common writing course. In addition, they are required to enroll, together, in at least two general education courses, some of which are taught in their residence. These general education courses are often large lecture courses with small group discussion sections, led by teaching assistants, which are reserved for RAP students. RAP is open to all first-year students on a first-come, first-serve basis, and there are over seven hundred first-year students enrolled in RAP each year.

Talent Advancement Program (TAP). The TAP program, which began in 1989, is a special and more highly structured variation of RAP. It is a selective living-learning community in which first-year students are invited by their major department to enroll in the program, based on their high school academic record and SAT scores. TAP enrolls over three hundred students each year. TAP participants live together in groupings of twenty-five to fifty students, they are required to enroll in a minimum of two courses together and they participate in a freshman year seminar designed to introduce them to the work of their respective faculty. Most of the twelve TAP programs have faculty coordinators and peer advisors who work closely with students in the program.

Commonwealth College: Honors Living-Living Community. The Honors Living-Learning Community was created in Fall semester 1999 for students admitted into the Commonwealth College Honors Program. First-year students are invited to enroll in this program, to live and study with other Honors students, based on their high school academic record and SAT scores. Participants are required to enroll in two honors' section general education courses each semester. The program also offers students the opportunity to enroll in special seminars and small classes taught by faculty in their residence hall.

Stassen (2003) referred to the work of (Love and Tokuno, 1999) to highlight the variability of program features among the RAP living-learning communities. She wrote that

> Tokuno's framework includes five dimensions (student collaboration, faculty collaboration, curricular coordination, shared setting, interactive pedagogy), and LCs can be ranked as "low," "medium," or "high" on each dimension. Love and Tokuno suggest that the more developed the LC is on each dimension, the greater the benefits that will accrue for student participants. While not included in Tokuno's framework, the issue of shared identity has also emerged in the literature as an important component of LCs (Stassen, 2003, p. 589).

Stassen's (2003) analysis on each RAP programs' placement on the continuum with each of these six dimensions is summarized in Table 1, which is included in Appendix A with this study. Table 1 demonstrated that (a) variety does exist among the three RAP programs, although they are all derived from the same basic model, (b) the TAP program places a greater emphasis on student and faculty collaboration, (c) TAP and Honors programs enjoy a stronger focus on group identity, (d) the RAP program is the least coordinated and least structured of these LCs, and (e) because these programs have no

pedagogical coordination, the type of pedagogy varies by the individual instructor (Stassen, 2003).

Special Interest Residential Programs (SIRP)

SIRPs are student or staff-initiated living-learning communities. SIRPs are structured to provide students with an opportunity to participate in a living-learning community that is organized to support a variety of cultural, personal identity, educational interest, or lifestyle preferences. Unlike the Residential Academic Program communities, SIRPs do not require participants to enroll in classes together or to meet with faculty in the residence hall. Staff and student leaders within the SIRP communities organize social and educational programs for community members. These attendance-optional programs vary depending on the theme of the SIRP, and the content often concerns issues related to diversity, civic responsibility, leadership development and academic success. The seven SIRP programs are described below.

Nuance: Multicultural Student Program. The Nuance program is a multicultural living-learning community for any student. Participants learn about diversity through peer support programs and by participating in cultural awareness and educational activities. Involvement with the Nuance House Council, discussion groups and intramural teams encourages students to become acquainted in informal surroundings. The Nuance program involves approximately three hundred students, most of whom are students of color.

Asian/Asian-American Student Program. This living-learning community is designed for Asian, Asian-American and other students interested in Far Eastern culture.

The program seeks to create a supportive learning environment for all members, and staff and students organize activities that enhance personal growth and academic achievement. This community serves forty students each semester, and participants are encouraged to utilize the resource available in the United Asian Learning Center, which includes tutoring, advising and personal counseling.

Harambee: African Heritage Student Program. Harambee is a living-learning community for African American and other students who are interested in the study of African culture. Residents are invited to participate in a mentoring program that matches them with faculty or other university staff members, whose role is to serve as counselors and guides. Additional support is available from the Committee for the Collegiate Education of Black and other Minority Students (an academic support services center), and the Afro-American Studies Department. The Harambee program is organized to accommodate up to thirty students.

Kanonshesesne: Native American Student Program. Kanonshesesne is a living-learning community for Native American and other students interested in native cultures. Program participants and staff work with the Josephine White Eagle Cultural Center to sponsor educational support services and social events. Residents are invited to participate in activities to study local Native American history and culture. The program is designed to accommodate up to forty students.

Lewis International House Program. International students and those from the United States have the opportunity to become acquainted across diverse cultures as part of the International House living-learning community. Students with an interest in international living are encouraged to join the program and to participate in discussion

groups, lectures and presentations, special dinners, field trips and other events. This program can accommodate up to ninety students.

2 in 20 Program. The 2 in 20 program is a supportive residential community for gay, lesbian, bisexual, and transgender students and their "allies." All residents are encouraged to organize and attend activities such as special dinners, movie nights, and educational workshops. The program is designed to accommodate a total of forty students.

Wellness Program. Students committed to a lifestyle free of alcohol and drugs can choose to live in a wellness community. Residents must agree not to use of possess alcohol or any other mood-altering substances in this living-learning community. Student and staff sponsored educational activities focus on topics related to sobriety and a variety of other health and wellness concerns. This program is organized to accommodate up to one hundred and twenty students.

Table 2, which also is listed in Appendix A, summarizes where the seven SIRP programs fall on a continuum with each of the six dimensions discussed by Stassen (2003). Table 2 demonstrates that (a) very little variety exists among the seven SIRP programs on these dimensions, (b) each of the programs involve a focus on student collaboration, shared setting and group identity, (c) none of these programs involve any focus on student collaboration, curricular coordination and there is no academic/ pedagogical component, and (d) the SIRPs are clearly the least coordinated and least structured of any of the living-learning community programs discussed in this study.

In summary, three Residential Academic Programs and seven Special Interest Residential Program represent the full range of living-learning community programs on

the UMass, Amherst campus. The Residential Academic Programs are organized around an academic theme, each offers participants a structured classroom experience, and students must qualify academically and accept an invitation by their department to participate in the Talent Advancement Program and Honors College Program. The seven Special Interest Residential Programs are less structured, they are not organized around an academic theme, and participants do not enroll in classes together. With the large number and diverse type of program offerings, UMass provides an ideal environment in which to broaden the scope of what is known about living-learning communities.

Study Purpose

This study will analyze the outcomes associated with student participation in the Special Interest Residential Programs (SIRPs) at the University of Massachusetts, Amherst(UMass). The study sample will represent the low-end (less structured) learning communities on the UMass campus, thereby avoiding the selection bias found in studies that only report on the outcomes associated with the high-end (highly structured) programs found on some campuses. The RAP and TAP programs, at UMass, are fine examples of high-end learning communities, and they have been researched by others (Stassen, 2003). The data derived from Stassen's (2003) research will be discussed in comparison to the current study's data on low-end learning communities; however further anaylsis will not be conducted on this data set.

The data derived from a recent University survey will serve as the research basis for this study. The Spring semester 2002 Special Interest Residential Programs survey

designed and administered by the Residence Life and Student Affairs Research and Information Systems(SARIS) offices gathered data on outcomes associated with participation in living-learning programs at UMass. These outcomes include basic information concerning student plans with persistence, student self-reported academic performance, and various indicators of academic and social integration and engagement. The outcomes related to academic and social integration and engagement are drawn from the work of Stassen (2003) and they include the quality and/or amount of student's (a) interaction with faculty outside the classroom, (b) interaction with peers, (c) involvement in positive learning behaviors, (d) perception of a positive academic climate, (e) involvement in campus activities, and (f) feelings of commitment to the university. A detailed discussion on the design of the SIRP survey, and its relationship to the 2001 RAP survey is provided in Chapter Three of this study.

Twelve questions will be discussed to report outcomes associated with participation in living-learning communities at UMass, Amherst. These questions include (a) are SIRP participants more likely than non-participants to engage in academic work with their peers, (b) are SIRP participants more likely than non-participants to express positive academic behaviors, (c) are SIRP participants more likely than non-participants to enjoy a positive learning environment, (d) do SIRP participants express stronger feeling of commitment to the institution than non-participants, (e) are SIRP participants more likely than non-participants to be engaged in diversity issues, (f) do SIRP participants express greater interpersonal competence than non-participants, (g) do SIRP participants report greater satisfaction than non-participants with their residence hall experience, (h) do SIRP participants spend more time studying than non-

participants, (i) do SIRP participants report higher GPAs than non-participants, (j) are SIRP participants more likely than non-participants to participate in student activities, (k) are SIRP participants more likely than non-participants to meet students on their floor with whom they have things in common, and (l) do SIRP participants express more confidence than non-participants that they will return to UMass?

The data and findings related to these specific research questions will help to inform the discussion of three broad questions with this study although other significant issues may be examined based on the data. The first question is what are the outcomes associated with participation in all living-learning communities at the university? The second question will examine if participants in the more structured and academically oriented living-learning communities at the university derive different outcomes than students involved in the less structured programs that are not organized around an academic theme? The third question is what are the differences in outcomes between students involved in living-learning community programs and students who reside in traditional residence hall settings that do not provide a living-learning program? The survey scales and individual variables that serve as outcome measures in this study are discussed in Chapter Three.

Significance of Study

Shapiro and Levine (1999) argued that learning communities are both a practical and pedagogically sound program model for addressing the criticisms and challenges directed at higher education today. Their perspective is based on research demonstrating that participation in such programs leads to greater student success in various measures

including persistence, retention, and gains in critical thinking and writing abilities. Despite these claims a significant gap exists in the literature on living-learning communities. Most research on the outcomes associated with participation in these programs has involved highly structured and more resource dependent models that often incorporate an integrated curriculum, frequent faculty contact and on-site academic services. However, many campuses can not afford these more coordinated, and expensive models, and that has resulted in the development of more modest learning communities. Lindblad (2000), and Tinto, Love, and Russo (1994) suggested that research on living-learning communities must study the impact of the full range of learning community models to determine the extent to which less formal and less resource-dependent programs can achieve desired outcomes similar to those that are possible for the more structured and expensive programs.

This study is significant because it recognizes some of the research design and related data problems that prompt questions in the literature on the impact of living-learning community participation on undergraduate students. The student outcomes derived through participation in the full range of living-learning communities on one campus will be documented, and this research will serve to broaden the scope of what is known about outcomes associated with participation in living-learning communities.

Finally, this research will provide educators and administrators with more data to assess the relative benefits associated with living-learning community program models that differ on a variety of measures including program theme, academic focus, funding, and faculty and student contact. At the very least, this information may assist faculty and staff in determining the structures that best support learning in these programs, and

help clarify how learning can be promoted and enhance in the living-learning environment.

Study Limitations

Shapiro and Levine (1999) suggested that in their experience the "evaluation of the effectiveness of learning community programs may reveal unintended or unexpected outcomes. Therefore, a flexible research design is essential to capture the broad picture of what students and teachers experience as members of learning communities" (p. 153). They also stated that a flexible and integrated research approach that relies on both qualitative and quantitative research methods is more likely to serve the complex needs of most campuses as they review their programs. Participant interviews, observation, focus groups, and various scientific experimental techniques assist in the study of issues including, but certainly not limited to: (a) who enrolls, (b) why they made that choice, (c) how they behave, (d) how participation affects students involved in a living-learning community versus those who are not in such a program.

This study design, which involves a secondary data analysis of administrative data, is not a fully integrated research methodology involving both qualitative and quantitative techniques. Given the limits of this methodology this study does not address questions such as the personal and academic background of the students surveyed, and why they chose to join a living-learning community program. Also, because this study involves a secondary data analysis, not all variables that the researcher might have wanted to ask can be analyzed.

As Stassen (2003) reported, not all students at UMass are involved in living-learning communities and students are not randomly assigned to these programs; thus student self-selection into living-learning communities remains an issue in understanding their effect. In studies such as this, "where controls have not been put into place, the positive findings may be the result of student motivation and academic determination." (Stassen, 2003, p. 586) In these cases, it is possible that students who are most motivated to succeed take advantage of the living-learning community opportunities and, as a result, retention and academic performance rates for learning communities are better because of this self-selection, not the program components themselves.

This study examines students' perceptions of their experience on campus. The study focused on the perceptions of students involved in the programs and did not expand to include program staff and faculty involved with the living-learning community programs. Different findings might have been identified had the survey sample included staff and faculty associated with the program.

The outcomes data involved in the study are self-perceptions reported by students, and actual grades and test scores were not collected. Therefore, a variety of factors such as differences with respondents' interpretation of response scale items, survey response errors, and the possibility of intentional inaccurate reporting of data, such as GPA scores, must be acknowledged with these data.

Finally, this is a single institution study, thus the results are not necessarily representative of other colleges and universities. This and other limitations with this study should be addressed in future research on the outcomes associated with student participation in living-learning communities. Because each campus culture differs and

the characteristics of the UMass, Amherst residence life program does not necessarily reflect the characteristics of any other program, individual campuses should consider conducting separate investigations to determine the outcomes associated with student participation in living-learning programs.

Despite these limitations this study will provide data that will help answer a number of questions in the current literature on living-learning communities. New data on outcomes associated with student participation across living-learning community programs at UMass will help clarify if the more structured and academically oriented programs derive different benefits than less structured programs that are not organized around an academic theme. The study also will yield new research on the different outcomes derived by students involved in living-learing community programs and those who reside in traditional residence hall settings that do not provide such programs.

Organization of Dissertation

In summary, Chapter 1 introduced the problem with living-learning communities in higher education today. This chapter provided a detailed listing of the SIRP living-learning communities, and concluded with a discussion of the statement of purpose, specific research questions and the limitations with this study.

Chapter 2 is devoted to a review of the literature on living-learning communities. This chapter provides background on the educational philosophy that influenced the movement to create living-learning community programs and identifies innovators who have contributed to its development. The chapter also includes a review of the literature on the design and structure of these programs, and four examples of model programs are

discussed in detail. Chapter 2 concludes with a review of research on the outcomes associated with living-learning community participation.

Chapter 3 details the research design and methodology used in this study. This chapter discusses the specific research questions and the data analysis techniques employed in this study of living-learning community outcomes.

Chapter 4 summarizes and discusses the findings related to each of the research questions, and Chapter 5 presents conclusions drawn from this study, and offers recommendations for further research on this topic.

CHAPTER 2

REVIEW OF RELATED RESEARCH AND LITERATURE

This chapter provides a background of the educational philosophy that has influenced themovement to create living-learning communities and identifies innovators who have contributed to its development. The chapter also includes a review of the literature on the design and structure of learning communities, and four examples of model programs are discussed in detail. This section concludes with a review of research concerning the outcomes associated with living-learning community participation.

Historical Perspective

Alexander Meiklejohn, John Dewey, and Joseph Tussman are cited in the literature as the most influential educators with the development of learning communities (Gabelnick, et al., 1990; Goodsell Love, 1999; Lenning & Ebbers, 1999). Alexander Meiklejohn was a critic of the "fragmentation and specialization" he saw in undergraduate education. He recognized the relationship between education and democracy, and promoted an educational environment that prepared students for their lives as citizens (Goodsell Love, 1999). Meiklejohn's contributions to modern learning community models "centered on the structural reform of course programs and their sequencing, as well as curricular reforms related to citizenship and democracy" (Goodsell Love, 1999, p. 5). He wrote that

> schools and colleges are not something apart from the social order to which they belong. They are that order trying to prepare its youth for participation in its own activities. And a society can teach only the hopes, the knowledge, the values, the beliefs which it has. If knowledge is broken into pieces, if beliefs are shaken, if values become uncertain, then

> inevitably teaching loses its grip, falls into hesitations and incoherence. (Meiklejohn, 1932, p. x)

Meiklejohn created the Experimental College at the University of Wisconsin, in place from 1927 to 1932, and he organized the program on the principles of connected and integrated learning (Shapiro & Levine, 1999). Meiklejohn believed that (a) educational planning and teaching should not be done by large faculties, but by small and relatively independent groups of teachers, (b) the greatest need in undergraduate education at the time was coherence, unity of interest and intention, and that (c) liberal education required exposure to the different fields of knowledge. On this point Meiklejohn (1932) wrote, "the essential task is that of bringing these elements into order, into meaning"(p. xvi). He believed that this approach would support the aim of education which involves the creation and cultivation of insight or intelligence "in the conduct of their own lives as human individuals"(p.6), rather than providing specialized vocation training.

Certain aspects of the overall design of this program are still considered by some as a prototype of the modern living-learning community (Shapiro & Levine, 1999). For example, he referred to faculty members as advisors, and discussed how they collaborated and shared in the teaching of all course work. As well, faculty offices' were located in student living quarters, and the program required that a fixed cohort of students take a set sequence of courses over two years in order to help them integrate their learning with their real world experiences.

John Dewey's contributions to the creation of learning communities were teaching and learning innovations, that focused on "active learning approaches that were student-centered and experientially-based" (Goodsell Love, 1999, p. 5). He stressed the

dynamic nature of student development and argued against the "banking system" of education which viewed faculty as the possessors of knowledge, and students as vessels into which information was to be poured. Dewey believed that traditional education was misguided with its focus on "formation from without" and he argued that the correct focus of a progressive education was on "development from within" (Dewey, 1938, p. 286).

Dewey viewed learning as a social process, and he argued that a progressive education required a collaborative relationship between teacher and student, and a commitment by both to "shared inquiry"(Gabelnick, et. al., 1990, p. 16). He also suggested that this emphasis on cooperation and collaboration with learning would teach "important lessons about social control and community life" (Gabelnick, et. al., 1990, p. 16). Dewey (1938) wrote

> Most children are naturally "sociable." Isolation is even more irksome to them than to adults. A genuine community life has its ground in this natural sociability. But community life does not organize itself in an enduring way purely spontaneously. It requires thought and planning ahead. The educator is responsible for a knowledge of individuals and for a knowledge of subject-matter that will enable activities to be elected which lend themselves to social organization, and organization in which all individuals have an opportunity to contribute something, and in which the activities in which all participate are the chief carrier of control. (p. 56)

The literature on learning communities suggests that Meiklejohn's insights and innovations related to curriculum, program structure and focus on community, with the teaching and learning innovations of Dewey have guided the development of contemporary learning community models (Gabelnick, et. al., 1990; Goodsell Love, 1999, Shapiro & Levine, 1999).

In the 1960s, Joseph Tussman created a program similar to Meiklejohn's. The "Experiment at Berkeley" was conceived by Tussman as an attempt "to reincarnate the spirit and principles"(p. vii), of Meiklejohn's College. It was developed as a two-year program of study in which a cohort of students took a predetermined set of courses that were team-taught by a group of faculty members (Tussman, 1969). This type of program addressed the weaknesses, as Tussman saw them, of offering courses as discrete units, having little relation to one another. Of the traditional college curriculum, he wrote:

> The course forces teaching into small, relatively self-contained units. Horizontally, courses are generally related and competitive... They are normally in different subjects, given by different professors, and, with rare exceptions, there is no attempt at horizontal integration. Thus, each professor knows that he has a valid claim to only a small fraction of a student's time and attention. The effect is that no teacher is in a position to be responsible for, or effectively concerned with, the student's total educational situation. The student presents himself to the teacher in fragments, and not even the advising system can put him together again. (Tussman, 1969, p. 6)

The "Experiment at Berkeley" was a residentially-based program, sited in a former fraternity house. The program accommodated up to one hundred and fifty students and the faculty members employ varied instructional techniques including lectures, seminars, individual conferences, and extensive writing exercises to promote student learning (Tussman, 1969).

Although it lasted only four years, and Tussman acknowledged the "turbulence" the program endured during its first few years, the Experiment at Berkeley is often cited as a significant early model of learning community programs. In fact, Gabelnick (1990) wrote that "Tussman's ideas took deep root in the state of Washington in 1970, where a group of seventeen planning faculty were designing a new, state-supported "alternative college," The Evergreen State College" (p. 14). Evergreen State College was organized

to allow year-long learning communities called "coordinated studies" programs that were team taught and organized around inter-disciplinary themes" (Gabelnick, et. al., p. 14). This coordinated studies program continues at Evergreen State College today, and this pedagogical approach has been incorporated into dozens of learning community programs across the country (Gabelnick, et. al., 1990; Lenning & Ebbers, 1999; Goodsell Love, 1999).

Goodsell Love (1999) wrote that the "movement" in American higher education to create learning communities was "influenced by two relatively recent philosophical shifts in higher education: the shift from a focus on teaching to a focus on student learning, and the shift from viewing knowledge as primarily involving the acquisition of information to the social construction of knowledge" (p. 6). Neither shift has been rapid, nor are they completely entrenched in higher education today. Nonetheless, each is critically important to the discussion of the development and potential of learning communities, as they focus more attention on the student learning experience than the traditional paradigms (Goodsell Love, 1999).

With this shift the "college's purpose is not to transfer knowledge but to create environments and experiences that bring students to discover and construct knowledge for themselves, to make students members of communities of learners that make discoveries and solve problems" (Barr & Tagg, 1995, p. 15). In this new model, students become co-producers of learning, and are encouraged to take more responsibility for, and become more actively involved in their own education. This change encourages faculty and students to employ new and innovative ways of exchanging information, so that

professors serve as coaches and guides as well as experts with their disciplines (Barr & Tagg, 1995).

> The paradigm shift toward the social construction of knowledge has been attributed to a number of higher education philosophical and pedagogical reform movements including the fairly recent development of feminist studies, constructivist pedagogy, and liberation theory. (Goodsell Love, 1999, p. 6)

While social constructionist thought is not the focus of this dissertation, one can see its connection to learning communities is evident from the following description

> Social constructionism, an expanding web of epistemological perspectives in several disciplines, springs from the assumption that knowledge is socially—rather than individually—constructed by communities of individuals. Knowledge is shaped, over time, by successive conversation, and by an ever-changing social and political environment. The knowledge business should not be just the territory of competing scholars or experts, the social constructionists argue; the shaping and testing of ideas is something in which anyone can participate. (MacGregor, 1992, p. 38)

These two recent shifts in educational philosophy, built upon the work of Dewey, Meiklejohn and Tussman, and coincided with and provided content support to the movement in American higher education to create learning communities as a means to enhance undergraduate education.

Learning Community Models

Although learning communities can take the form of a few basic models, many variations have evolved to meet the unique needs of diverse student populations and the interests of individual institutions. No single, all-inclusive definition of the term learning community exists in the literature. On many campuses there are various learning community models serving multiple needs. Most are structured to (a) create a cohort of

students who take at least two classes together, (b) support an interdisciplinary team of faculty teaching around a common theme, (c) encourage students to form study groups, and spend time socializing outside of class, (d) promote class activities and assignments that require students to work together, and (e) cluster living space to create a physical community (Gablenick, MacGregor, Matthews, & Smith, 1990; Lenning & Ebbers, 1999; MacGregor, Smith, Matthews & Gabelnick 1997).

Additionally, the ideal of faculty and students—and sometimes administrative staff—working collaboratively toward shared, significant academic goals in an environment where competition is de-emphasized is a value often expressed in these communities. Learning communities purposefully reorganize the curriculum to link together courses so that students find greater coherence in what they are learning as well as increased intellectual interaction with faculty and fellow students (Gabelnick, MacGregor, Matthews, & Smith, 1990; Lenning & Ebbers, 1999; Shapiro & Levine, 1999; Strommer, 1999). These communities usually employ collaborative and active approaches to learning, some form of team teaching, and interdisciplinary themes.

MacGregor, Smith, Matthews, and Gabelnick (1990) outlined three basic academic models of learning communities that differ according to the arrangement of classes and the extent to which the faculty collaborate. The models also vary according to class size, class linkages, and collaboration between students and faculty, but they all provide the basic framework upon which different variations are built.

The first and most basic model involves forming student cohorts in larger classes. In this model, cohorts of students register for the same sections of a minimum of two courses, but they are not the only students in those courses. Intellectual connections

across material and community-building may take place in an integrative seminar, only for the cohort. This model enables the student peer group to develop around a common core of courses, but the faculty members are not necessarily committed to changing classroom instruction.

The second model involves the creation of paired or clustered classes. In this type of program, courses are paired, sometimes according to a theme; faculty plan the program collaboratively, but teach their courses independently. A cohort of students take the courses together but may not be the only students in all the courses. The faculty organize the curriculum to help students make intellectual connections, and student collaboration and community building takes place across the paired courses.

The third model is alternately called a team-taught or coordinated studies program, which often has an academic theme. In this type of program there is an integrated core of courses that a faculty team teaches. Students take the majority, if not all, of their courses together. In many of these programs all content and assignments are integrated across the theme of the program.

Despite their individual differences, each of these three models intentionally restructures the curriculum in order to link or cluster classes for a cohort of students. Each of these models intends to integrate the curriculum and make the student learning experience more coherent, and provide student and faculty increased opportunities for interaction, but not to the same extent.

Residential Learning Community Models

There is growing evidence that undergraduate education can be enhanced when colleges and universities create educational opportunities for students beyond the traditional confines of the classroom (Boyer, 1987; Kuh, Schuh & Whitt, 1991; Pascarella & Terenzini, 1984). Schroeder and Mable (1994) concurred with this assessment when asserting that although institutional literature often describes residence halls as educational, they are primarily a social setting; they are a part of the institutions educational activity, yet not in a central way. Residence halls have lacked educational planning, strong internal direction, and a set of educational objectives connected to the goals of undergraduate education. (p. 13)

Despite the current shortcomings of residence hall programs on many campuses, the positive impacts of living on campus versus commuting to college are well documented (Blimling 1993; Pacarella & Terenzini, 1991). It has been demonstrated that living on-campus is one of the most significant determinants of a student's level of involvement and integration into the cultural, social and extracurricular life of the campus (Chickering, 1974; Pascarella, 1984). Resident students report more contact with their peers as well as faculty, and they report high levels of satisfaction with their institution (Chickering, 1974; Pascarella, 1984). Importantly, this pattern persists when controls are made for a wide range of academic and socio-economic factors (Pascarella, 1985).

Resident students report higher levels of social integration during college, and they persist and graduate in greater numbers than do students who commute (Astin, 1975; Tinto, 1987). Again, this pattern holds up when controls are added to the study to

adjust for academic performance, aptitude, socioeconomic status, and other factors that contribute to educational attainment. In addition to the gains in involvement, integration, satisfaction, and persistence, the research on this topic demonstrates that students who live on campus report gains in areas of personal development, such as increased levels of autonomy and self-motivation, and the cultivation of aesthetic, cultural, and intellectual values, as well as a tendency towards social and political liberalism (Schroeder & Mable, 1994). For these reasons, Pascarella and Terenzini (1991) have concluded that living in college residence hall versus commuting to college is perhaps the "single most consistent within-college determinant of impact" (p. 611).

Clearly, intentionally designed living-learning communities developed around specific themes or student populations are one way of connecting the educational objective of the residence hall to those of the institution. When they are designed appropriately, the residential setting can provide unique and powerful academic learning opportunities that cannot be duplicated in the classroom. In 1984, the National Institute of Education encouraged the development of such programs, stating every institution of higher education should strive to create learning communities, organized around specific intellectual themes or tasks...dormitories can be organized to offer their own academic program and are thus one working model of what we have in mind (p. 33). This perspective is even more valid today in light of research demonstrating that important educational outcomes such as enhanced academic performance, greater satisfaction with college, and increased retention rates are being attributed to student participation in well-designed living-learning communities (Pascarella & Terenzini, 1994).

Today, a growing number of colleges and universities seek to integrate academic and residential experiences to meet students' educational and developmental needs (Gabelnick, MacGregor, Matthews, & Smith, 1990). Depending upon the student population, the amount of institutional support, and the facilities available, these living-learning communities (LLC) take a variety of shapes, even within institutions. A brief description of several institutional living-learning community programs follow. These examples were selected because they illustrate current practices with programs geared toward first-year students, although they are not necessarily representative of the entire array of efforts seen across the country.

Earlham College Model

Earlham College is a small liberal arts college located in Richmond, Indiana. Founded by the Society of Friends (Quakers), the college's statement of purpose proposes to create a community where "teaching and learning roles are merged, and the curricular and experiential practical action" (Kuh, Schuh, Whitt, & Associates, 1991, p. 44).

Approximately 800 of Earlham's 1,100 students live on-campus in traditional residence halls and university-owned houses. The residence halls at Earlham are "intentionally arranged to accentuate connections between students' out-of-class experiences and liberal education" (Kuh, Schuh, Whitt, & Associates, 1991, p. 218). The campus emphasizes the importance of critical thinking and responsible citizenship, and they assign responsibility for the creation of community standards to their students (Schroeder, Mable, & Associates, 1994). Connections between student life in the

residence halls and the curriculum can be seen in the Living-Learning Humanities Hall. One hundred first year students self-select into this program which is intended "to provide an academic and social orientation to Earlham, introduce concepts of humanistic education, build writing and research skills, and immerse new students in the collaborative and interdisciplinary process valued by the college" (Schroeder, Mable, & Associates, 1994, p. 137).

Course requirements involve reading a book a week from various disciplines including history, philosophy, and literature. Students also are expected to write a paper each week on the assigned text. In addition to structured class time, faculty and students participate in scheduled tutorials where students review each other's papers with guidance from the faculty member. Most of the classes and tutorials are scheduled in classrooms in the residence halls.

Faculty members who teach in the program report that participation in the Humanities Hall increases student-to-student, and student-to-faculty conversations about the humanities and extends these conversations into the residences, thereby, increasing opportunities for involvement with the subject matter (Schroeder, Mable, & Associates, 1994). Faculty members report that because students have a paper due every week, collaboration is enhanced, and academic work becomes a central part of student interaction in their living community. Faculty members also report that students tend to become more comfortable speaking in front of their classmates, and they appear more comfortable asking for assistance and serving as tutors with their classmates (Schroeder, Mable, & Associates, 1994).

Earlham College reports that the Humanities Hall, and others like it on the campus, are important because they help students recognize important connections among their course work, the Quaker traditions of the institution, and the real challenges they face in their daily lives. It is noteworthy that most decisions in the Humanities Program and the residence hall are made by consensus, thus affirming the Quaker belief that there is a "light of truth" in each person (Krehbiel & Strange, 1991). The program's collaborative learning emphasis also supports their belief that no individual can possess all "truth" and all group members and sides of an issue must be considered (Krehbiel & Strange, 1991).

Washington State University Model

Washington State University, located in Pullman, Washington, is a large, public institution serving approximately 10,000 undergraduate students. In Fall 1989, a university task force was established on the campus to study and make recommendations to improve the services and educational offerings provided to first year students. William Zeller who served as the chief housing officer on the campus at that time reported that the residence halls were immediately identified as settings where significant interventions could take place. However, the areas with the highest concentrations of first-year students seemed to have poor educational environments with high rates of dissatisfaction, discipline problems,... and high vandalism rates. (Shapiro & Levine, 1999, p. 126)

In Fall semester 1990, Washington State initiated the PAWS Program (Partners Achieving WAZZU Success) as a pilot living-learning community for first year students. The term WAZZU is a commonly used nickname for Washington State University.

The PAWS program has enjoyed great success and now serves 1,300 first-year students, which is approximately one-half of the freshmen class (Zeller, 1996). The academic program places clusters of twenty students, who live together, in two general education courses during the first semester of the freshmen year. The students are required to work together on class projects and assignments with their learning community members. Students also are assigned to study groups with their cluster, and student peer advisors and faculty lead tutorials during the semester.

The students also are also required to attend a one-credit freshmen seminar. Seminar participants meet each week for one hour of lecture, one hour of computer-based lecture, and one hour of writing skills work. The seminar is described as "writing-intensive" and participants must complete two writing projects—one at midterm and one at the end of the semester. One important component of PAWS is the peer academic advisors who live and work with first year students in the residence halls. Each of the sixty-five advisors is paired with a Resident Assistant (RA), and these staff members collaborate on programming and academic support activities throughout the year. Academic Advisors are trained and supervised by the campus Student Advising and Learning Center, and each advisor is assigned to work closely with twenty students.

PAWS program faculty members frequently visit their students in the residence hall to enhance faculty-student contact. These interactions include study sessions, tutorial work, and social and recreational activities. As a result, the PAWS program staff

members report that the student learning communities become very cohesive, and serve the academic and social support needs of the students who participate.

The PAWS program also includes an Academic Resource Center that was created to integrate the campus' academic and residential resources and to promote positive educational activities. The center includes a computer lab, tutorial staff and services, specialized programming—such as study skills and time management skill development, and on-site academic advising services. The center is located in a residential area that provides housing to the majority of program participants (Zeller, 1996).

Washington State has conducted extensive research on the impact that the PAWS program has on their students. For example, findings from the 1994 College Student Experience Questionaire(CSEQ) indicated that Paws students were significantly more likely, than non-PAWS students to interact informally with a faculty member, establish relationships with other students and join student groups, and be more involved in campus life (Zeller, 1996).

Campus-based assessments indicate that students regard their neighbors-classmates as their most significant source of support. Students value the option to enroll in several smaller sized classes as a learning cluster (Zeller, 1996).

The norms of the learning community members were very influential. Zeller (1996) reported that in the classroom, students would alter their behavior to maintain their connection with other members of the learning community. Students indicated that behaviors such as participation in class discussion, note-taking, and the time they spent studying increased to conform to what they thought other members were doing.

Finally, PAWS faculty members have indicated that the living-learning experience has been positive for them and their students. Researchers found that the program facilitates the formation of study groups. Classroom attendance rates and participation are better than for non-PAWS program classes. It is not surprising that the program faculty have consistently expressed a concern for students who would benefit from the program, but are not participants (Zeller, 1996).

University of Missouri Model

The University of Missouri, Columbia is a public land- grant institution, with an enrollment of approximately 18,000 undergraduates. With the arrival of a new chancellor in 1994, the university established a goal to "recapture the public's trust" by focusing more attention on promoting student success through enhancing undergraduate experiences (Blimling, Whitt, & Associates, 1999). In response to this mandate, the Division of Student Affairs joined with the College of Arts and Sciences to design residential learning communities that would (a) enhance academic achievement, retention, and educational attainment for first-year students, (b) make the campus "psychologically small" by creating peer reference groups for new students, (c) integrate curricular and co-curricular experiences to create a seamless learning environment, and (d) encourage faculty to integrate their scholarship across disciplines, thereby enhancing general education outcomes for students (Blimling, Whitt, & Associates, 1999).

To accomplish these objectives the university created the Freshman Interest Group (FIG) program. The FIG program allows groups of fifteen to twenty first-year students to enroll in the same sections of three general education courses, to live in the

same residence hall, and enroll in a one-semester course designed to integrate the three general education courses. When the program began in fall 1995, twenty-two learning communities were organized around general academic themes such as "Society and Science" and "America's Diversity." Today the program has grown to serve over one thousand students in sixty FIGS that include all of the University's schools and colleges.

FIGS are located in over two-thirds of the University's nineteen residence halls. Upper-level students, with majors related to the FIG themes are recruited, trained, and compensated by the Undergraduate Advising Center to serve as Academic Peer Advisors. The advisors live and work in the residence halls, and they collaborate with Residence Life staff on academic and social interest programming.

Research on the FIGS program demonstrates that the program had a major impact on first-year student achievement, retention, and learning. FIG participants exhibited significantly higher grades, retention rates, and gains in general education outcomes; they also reported higher levels of academic and social integration and institutional commitment than did other first-year students. They demonstrated higher levels of involvement, faculty-student interaction, and interaction with peers. Perhaps most significantly, the academic and intellectual content of these interactions was higher for FIG students.

Stanford University Model

Stanford University enrolls approximately 6,500 undergraduates, and is described as national leader in research and graduate education and as an outstanding undergraduate college (Kuh, Schuh, Whitt, & Associates, 1991). Stanford's mission

includes a commitment to "bring knowledge and understanding to each new generation of young people, [and]...to provide the basis for ethical and responsible lives, productive careers, and contributions to public welfare" (Kuh, 1991, p. 48). This mission is also reflected in the goals of the university's residence halls which strive to enhance the intellectual life of the campus (Schroeder, Mable & Associates, 1996). Stanford offers several noteworthy living-learning communities for students throughout all years of undergraduate study. The Structured Liberal Education Program is one of the more interesting examples of how Stanford integrates the undergraduate curriculum within the student's residential experience.

Founded in 1974, the Structured Liberal Education (SLE) Program has two goals: (a) to provide a focused academic experience for first-year students, and (b) to provide that academic experience where the students live in order to lessen distinctions between students' in-class and out-of-class lives (Schroeder, Mable, & Associates, 1996). Students are selected by faculty to participate in the program on the basis of their responses to questions on the institution's housing applications. Faculty screen for students who express a desire for a "highly structured, highly interdisciplinary" academic experience and who are perceived to be serious students. All students involved with the program live in the same residence hall. A faculty Resident Fellow lives in the facility and interacts with students both in and outside of the classroom. Classes, discussion groups and SLE-related programs are scheduled within the residence hall.

The academic "heart of the SLE program is the twice-weekly discussion sessions among twelve to fourteen students and their teacher. The focus of the discussion is developing oral skills as students think aloud about books and ideas" (Schroeder, Mable,

& Associates, 1996, p. 141). The program curriculum requires that all participants read the same books and have the same assignments so that students and faculty have a common intellectual experience. Each SLE student is assigned his/her own tutor, and about three dozen tutors are assigned to work with eighty-five students. Former SLE participants often serve as tutors, and their work focuses on assisting students in developing their ideas and in honing their critical thinking skills.

Stanford describes students who participate in the program as "empowered in their own education, because they are asked to speak, to write, are heard and responded to, and experience a lot of evaluation. They think cogently and speak well and show intellectual self confidence" (Schroeder, Mable, & Associates, 1996, p. 142).

In summary, these programs were selected to provide the reader with examples of some of the types of living-learning communities that colleges and universities are creating to integrate the academic and residential experiences of first-year students, and to meet their educational and developmental needs. However, it is important to note that these models were drawn from a literature that involves "high end" more resource dependent living-learning community programs (Lindblad,,2000; Stassen, 2003). Therefore, it should be understood that while these programs may represent many of the best practices with living-learning community development, they are not necessarily representative of the full range of programs offered at institutions across the country.

The literature on the four living-learning community programs highlighted in this section suggested that these programs are based in institutions where there is a strong commitment to undergraduate education, and in the case of Washington State University and the University of Missouri these programs were developed to enhance the

educational experience of first-year students on those campuses. Each of the four programs includes a significant academic component. Students are required to enroll together in a minimum of two classes each semester, faculty are involved with students both within and outside of the classroom setting, and each program offers specialized academic and personal support services, such as tutoring and academic advising in their living-learning community.

Interestingly, the two larger institutions mentioned, Washington State University and University of Missouri, have designed smaller learning communities for their students within the larger university. In this way they successfully replicate the smaller and more intimate learning environment that Earlham College and Stanford University offered students in their program model.

The literature on living-learning community outcome suggests that programs that incorporating the educational components and service features described in these four programs serve to enhance various measures of student success, persistence, and satisfaction (Astin, 1984,1993; Tinto, 1987; Pascarella & Terenzini, 1991). However, these highly structured and integrated programs are heavily resource dependent and many campuses can only offer them to a small segment of their first-year student population. As well, because of these high financial and human resource costs many institutions elect to develop more modest learning programs communities on their campus.

Research Studies on Student Outcomes

The first large-scale attempt to implement and assess the effects of undergraduate student learning groups was initiated in 1980 by the U.S Fund for the Improvement of Post-Secondary Education (FIPSE) through the solicitation of proposals on active learning, with group learning highlighted as a area of special interest (Lenning & Ebbers, 1999). This initiative emerged after FIPSE staff observed that several of the projects they were funding had the use of learning groups in common, and that these groups "seemed to cause more active modes of learning, since students were able to assume greater control over what they learned and how they learned it" (Bouton & Garth, 1983, p.1). The FIPSE study concluded that learning groups such as those described at Stanford University, Earlham College, the University of Missouri, and hundreds of other campuses were the key variable accounting for successful learning across these projects. FIPSE's report stated that

> learning groups work—that is, they enhance learning—irrespective of the type of institution, type of student, level of education, or subject matter. Indeed, learning groups promote the broad liberal education goals that are often more honored by educational rhetoric than pursued in classroom practice—information and content, general disciplinary concepts, generic cognitive abilities, interpersonal skills, knowledge about higher education community, and the understanding of how to learn. Learning groups seem to increase both the efficiency and effectiveness of learning. (Bouton & Garth, 1983, p.4)

In the years following the release of the FIPSE report, Astin (1984, 1985, 1993) introduced the "involvement" model, and Tinto (1987, 1993) introduced the "student departure" model, both of which provide conceptual reasons why living-learning communities should impact college students (Lenning & Ebbers, 1999). In his writings on "involvement" Astin (1993) argued that the research on college student learning points to two unequivocal conclusions:

> (a) the more time and energy students invest in educationally purposeful activities the more they gain, and (b) the nature and quality of student, faculty and staff relations are more important to student learning than expenditures per student and a host of other measures. The importance of student involvement in learning and personal development was also underscored by The Study Group on the Conditions of Excellence in American Higher Education when stating that perhaps the most important [condition] for improving undergraduate education is student involvement…the more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth and achievement, their satisfaction with their experiences, and their persistence in college. (National Institute of Education, 1984, p. 7)

Tinto's "student departure" theory suggested that students enter college with varying patterns of personal, family, and academic characteristics and skills—including their intentions with respect to college attendance and personal goals (Pascarella & Terenzini, 1991). Tinto suggested that a

> student's intentions and commitment to college are modified and reformulated over time, through an on-going series of interactions between the student and the structures and members of the institutions. Satisfying and rewarding experiences with both the formal and informal academic and social systems are presumed to lead to enhanced integration, and thus to student retention. Negative interactions and experiences lessen integration, distance the student from the academic and social communities within the college, and lead to "departure" or withdrawal from the institution. (Pascarella & Terenzini, 1991, p. 51)

Both Astin (1984, 1985,1993) and Tinto (1993) emphasize that academic involvement, involvement with student peer group, and involvement with faculty are significant determinants of student academic development, satisfaction, and persistence. Their conceptual models are supported by a substantial body of literature examining how students change while in college, and the "within college" experiences that appear to influence these outcomes. Some research suggests that change in any dimension of a students' life appears to be shaped by multiple and very different factors and conditions

within the college setting (Kuh, 1994; Pace, 1990; Pacarella & Terenzini, 1991). This literature also suggests that there are two important factors relating to student growth and development: (a) whether students reside on-campus versus commutes to college, and (b) the environment found within the residence hall where students live. The research on residence hall environments suggests that students who live in living-learning settings that are designed to promote academic success can experience greater levels of academic achievement than students in conventional residence halls (Blimling & Hample, 1979; Blimling & Paulsen, 1979; Decoster, 1968; Duncan & Stoner, 1976; Edwards & McKelfresh, 2002, Kanoy & Bruhn, 1996; Strange & Banning, 2000).

The research also shows that living-learning community participants experience greater gains on certain measures of intellectual orientation and development than students who reside in conventional halls (Bennett & Hunter, 1985; Magnarella, 1975; Newcomb, Brown, Kulik, Reimer & Revelle, 1971). It is important to note that in their review of the literature on living-learning communities, Pascarella and Terenzini (1991) found that the students gains relating to cognitive development and intellectual growth appeared to result from the types and frequency of positive interpersonal interactions with peers and faculty members, and that living-learning community programs facilitated greater opportunities for such interactions. As well, there are studies suggesting living-learning communities that emphasize and facilitate student and faculty interaction, result in increased levels of academic integration, persistence and student satisfaction with their college experience for program participants (Clarke, Miser & Roberts, 1988; Pascarella & Terenzini, 1981; Pike, 1997). This is particularly important when considering the research that found, at least for traditional-age students, successful social integration

within the college serves to enhance academic integration, and comfort within the classroom leads to increases with learning (Tinto, 1998).

Finally, several recent studies suggested that living-learning community participants experience increased levels of social and academic integration through their participation in these programs, and as a result they are more successful and satisfied with their college experiences (Arminio, 1994; Henry & Schein, 1998; Meyer & Schuh, 2001).

In summary, many proponents of living-learning communities believe that residence hall interventions can be designed in ways to shape students' academic, intellectual, and cognitive growth, and to enhance satisfaction with their college experience (Pascarella & Terenzini, 1991). It appears that living-learning communities that provide increased opportunities for interaction with faculty and peers and assist students with the integration of social and academic lives within a college or university and its programs may have a positive effect on these important outcomes.

The remainder of this chapter will involve a detailed review of the literature on the outcomes associated with student participation in a variety of living-learning community programs across the country over the last thirty years. These outcomes involve various measures of academic achievement, intellectual engagement and development, involvement with faculty and peer group, and social and academic integration. A comprehensive search was conducted to gather research published in the Journal of College and University Student Housing, the Journal of College Student Personnel, and the Journal of College Student Development on living-learning community programs outcomes over the past forty years. This research serves as the

primary source of information with this aspect of the literature review. Table 3, Table 4, and Table 5, listed in Appendix A, provide a summary of the research studies that are reviewed below.

Academic Achievement

Studies comparing the academic performance of students enrolled in living-learning communities with peers who were not, consistently report differences between the groups, with participants earning higher grade point averages, even with studies that control for pre-college achievement (Blimling & Hample, 1979; Blimling & Paulsen, 1979; Decoster, 1968; Duncan & Stoner, 1976; Edwards & McKelfresh, 2002; Kanoy & Bruhn, 1996). Decoster's (1968) study involved 275 "high-ability" students at the University of Florida during the 1965-1966 academic year. He hypothesized that the grouping of "high-ability" students in a living unit would "facilitate the development of a scholastically oriented residential community, thereby allowing its members to gain academic achievement higher than that of a randomly assigned control group" (p. 75). He also hypothesized that the "high-ability" students who participated in the experimental group program would "find their living experience more satisfying and congenial" (p. 75).

The 134 students in the experimental group were housed exclusively together in "four living units" (p. 75), and the 141 students in the control group were dispersed throughout a separate building with students of varying abilities. The 275 students selected for the study had similar mean scores on the School and College Ability Test

(SCAT), and the two groups involved roughly the same number of female and male students.

Academic achievement was measured based on (a) cumulative grade point average, and withdrawal rate from the institution. A control for academic ability was devised by comparing a student's actual GPA with their expected average based on the SCAT score. Satisfaction with living environment was measured by (a) the number of students requesting to return to the same living unit for the following year, and (b) responses to a separate survey. Decoster (1968) found that "high-ability" female students, in particular, "seem to do better academically when assigned homogeneously to residence hall living units" (p. 77). The 63 women in the experimental group earned a GPA mean of 3.10 compared to a mean of 2.69 for the 72 women in the control group. There was no finding of mean GPA difference at a statistically significant level for the men in the study. He also found a significant difference between the two groups on this variable with the experimental group earning a GPA mean of 3.00 compared to a mean of 2.75 for the control group.

With regard to withdrawal rates, the experimental group of female students withdrew at a higher rate (6 total) than like members of the control group (0 total). Male students in the experimental group also withdrew at a higher rate (5 total) than like members of the control group (3 total). The withdrawal rate difference between female students and for the total students in the study was statistically significant.

Decoster (1968) was unable to offer an adequate explanation for this phenomenon, and he reported that of the "six women who withdrew only one was in serious academic difficulty" (p. 76). Four withdrew for medical reasons and one left

because of financial difficulties. Of the eight men who withdrew (total experimental and control group), seven reported academic reasons as the primary concern (p. 76).

This study also found that living-learning community program students were more satisfied with their residential environment than the students in the control group. In total, 59 students from the experimental group, versus 27 from the control group requested to remain in their current assignment. Decoster's (1968) survey also yielded data that suggested (a) the living-learning community program was more conducive to study, (b) informal "talk sessions" had more educational value, and (c) students were more often influenced by fellow residents to do better in their studies (p. 77).

Duncan and Stoner's (1976) study on the academic achievement of residents living in a scholar residence hall, at Southern Illinois University at Carbondale, involved 177 President's Scholar program students. The hypothesis with this study was "that living in a scholar residence hall would have a significant positive effect upon academic achievement of the participants" (p. 8). The study involved 177 total students with the control group coming from the 93 students who elected to reside in the Smith Hall, which served as the President's Scholars Honors Program residence hall, during the 1973-74 academic year. The comparison group involved 84 students who were "selected at random from all President's Scholars who did not reside in Smith Hall" (p. 8) and comprised the control group. To reduce bias in the study, the two groups were correlated as closely as possible with regard to age and sex characteristics.

The study was designed to control for several variable differences between the sample groups that needed to be held constant, such as sex, age, ACT scores, number of credit hours previously earned, and place of residence. In addition to reviewing GPA

data, the researchers interviewed several residents from the experimental group to learn about their views on how the program effected their academic achievement, and their general satisfaction with the program.

Duncan and Stoner (1976) reported that "tests of significance failed to demonstrate that Smith Hall had a statistically significant positive effect on the GPA of President's Scholars." (p. 8) They also found that living-learning community students performed better academically than those who did not participate in the program. The year-end mean GPA scores were 4.42 for Honors Hall students, 4.23 for student living in other residence halls, 4.22 for students living off-campus with other students, and 4.15 for students living with their parents. The mean GPA for all President's Scholars in the control group was 4.23.

The authors reported that student responses to the personal interviews were varied, but overall the responses indicated that living in the Honors Hall supported academic achievement. Students reported that the atmosphere in the program was conducive to study and living with other high achievers motivated them with their studies. Nearly 80% of the students interviewed indicated that living in the Honors Hall had not been detrimental in any way to their academic and social pursuits. However, a few did indicate that they felt that their social lives had suffered (p. 9). Unfortunately, the personal interview methodology with this study only involved a select group of students in the experimental group. Similar information is not available from the comparison group population on any of these variables. Therefore, a comparison between the experimental group and comparison group population in this study is restricted only to reported GPA.

Duncan and Stoner (1976) concluded that participation in the academic scholars program did yield some positive academic effects, particularly with regard to GPA. They also suggested that the study provided additional support to research that was being conducted on the effects of living on-campus versus commuting with regard to academic achievement (Astin, 1973; Chickering, 1974).

Blimling and Hample (1979) studied the effects of peer behavior and relationships on the academic performance of average-ability students. In the Fall semester of 1975, a two-year longitudinal study was undertaken to determine if the peer environment in a residential living unit could be structured in such a way as to create a common interest goal to achieve academically, could these average-ability students from varied academic disciplines, with diverse abilities and interests, also benefit from an academically oriented environment (p. 310). In the 1975-76 academic year, 14 special residential "study floors" with capacity to accommodate 40 students each were established at an unidentified campus. The 559 students in the experimental group during the Fall Semester of that year all self-selected to participate in the program. Students on these floors were not grouped by academic major or by previous academic performance, and a group of "approximately 1,500 students" were randomly selected from the 200 conventional residence hall floors at this campus to provide a control group with this study. Two graduate student floors and 14 special lifestyle floors were deleted from the pool of floors prior to the selection of control group participants, and this process yielded 1,330 control group participants.

In 1976-77, the program grew to include 40 floors, each with 40 student participants. During this year the experimental group included 1,489 students, who had

self-selected to participate in the program. The experimental group students were not grouped by academic major or by previous academic performance, and a group of 1,223 students who were randomly selected from the 200 conventional residence halls on this campus served as the control group with this study. As in the first year of this study, 2 graduate student floors, 14 special interest floors, and 22 floors that had shifted from conventional floors in 1975-76 to study floors in 1976-77 were excluded from the pool of floors prior to the random selection of control group participants.

There were five program elements involved with the study floor program, including a common identity in these communities as "study floors" and through the establishment of quiet hours either five or seven days a week, (b) positive role modeling of good study habits by participants, (c) a personal commitment agreement by each student to live on the floor and a stipulation that they would conform to the quiet hours expectation, (d) staff agreement to conform to and enforce policies related to quiet hours, and (e) a common understanding that it was a privilege to live in these communities (p. 311). Students whose behavior contradicted community agreements were moved out of the community.

After controlling for differences in academic performance between control and study floors explainable by academic ability and motivation, as measured by ACT score, accumulative GPA prior to the academic quarter, and GPA at the end of the quarter provided through university records, Blimling and Hample (1979) reported the following academic outcomes among their findings. Students living of study program floors have "significantly better grades than students living on control group floors" (p. 312). Living on a study floor "appears to raise the quarter's grades by about .05 of a point and

accumulative GPAs by over .02 of a point" (p. 313), the incremental difference with GPA and accumulative GPA between study program participants and control group members is "typically between .15 and .20 of grade point" (p. 313) respectively, and the pattern of higher GPAs earned by study floor participants continued in the second year of the study.

Blimling and Hample (1979) concluded that their study offers support for the study floor program. They argued that this type of living-learning environment had a statistically significant positive impact on grades, even after controlling for several variables associated with academic performance. The authors conceded that although study environments seem to improve academic performance, the exact causal agents are not obvious, and they acknowledged that these environments may not be suited for all students. They also mentioned that more study is needed to help identify additional indices of academic success, and for measures of academic motivation and social values.

Blimling and Paulsens's (1979) study on the effects of developmental intervention strategies in a residence hall environment on student academic performance and personal growth was conducted at Bowling Green State University during the 1975-76 academic year. The experimental group subjects for this study were selected from all the male students in the freshmen, sophomore and junior classes who were randomly assigned to live in one of the residence halls at that campus. Each male student was mailed program information and "approximately 40 students indicated an interest in the program." Twenty-two students were selected to participate in the program by using a "composite of academic interests, grade performance, and extracurricular activities which demographically best seemed to reflect the 'average' male living in the residence

halls" (p. 25) at that institution. The 22 students in the experimental group were assigned to live together "in one unit of a large men's residence hall." The comparison group in this study involved all male students "of the same class standing for each of the three quarters measured at the university" (p. 27). The living-learning community program involved an extensive list of services, including selective roommate matching criteria, based on academic ability, (b) established study hours, social and educational programs and workshops, (d) individual academic and personal counseling, and (e) frequent contact with faculty members affiliated with the program. Blimling and Paulsen (1979) found that the mean grade point average (GPA) for the living-learning community participants "was higher than the mean GPA for all men of the same class standing for each of the three quarters measured" (p. 27). The average increase in GPA over three quarters for all men involved in the study was .32 on a four-point scale. The difference in GPA between the freshmen involved in the study and the freshmen comparison group was approximately .40 on a four-point scale (p. 27) with study participants GPAs being higher. Also, the composite grades of students who participated in the living-learning community improved steadily as the year progressed, while the grades of the comparison group dropped dramatically during the year (p. 27).

This study also involved a survey designed to measure student reaction to their residence hall experience. The students involved in the living-learning community program reported that they derived (a) greater educational benefits, (b) felt a stronger sense of community, and (c) were more satisfied with their on-campus living experience than a comparison group of students living in a similar size conventional residence hall.

Kanoy and Bruhn (1996) initiated a study to determine "whether a private residential college that already possesses a well-developed sense of community can maximize first-year student academic achievement and retention through implementation of an extended, peer-facilitated program that intentionally targets residence hall student involvement" (p. 9). They hypothesized that students participating in the living-learning community would achieve higher GPAs and have better retention rates than students residing in conventional residence halls during their first year in college.

The study involved 84 of the approximately 250 first-year students at a small, private, residential women's college in the Southeast. The 29 students in the experimental group sample represented all first-year students who had self-selected to join the living-learning program. The 55 students in the comparison group were drawn from all first-year students assigned to a conventional residence hall program. The researchers reported using a matching procedure to develop the control grow with this study. This procedure considered predicted GPA for the experimental and control groups, based on a formula used by the college, which included variables such as high school grades and standardized test scores. No statistically significant difference was noted between the two groups on predicted mean GPA scores. The two groups were also considered to be similar on other characteristics such as age, sex, race and socio-economic status.

Both groups of students had access to extensive support services in their residence hall. However, only the living-learning community program offered a peer educator program. A total of four sophomore peer educators were responsible for planning additional social and educational programs, and for "developing one-to-one

relationships with a specific group of first-year students on her floor" (p. 12). The ratio of students to peer educators was roughly seven to one.

In addition to GPA scores, the data for the study were derived from three sources, the (a) Opinions and Involvement Survey (Kanoy, 1988), (b) Student Development Task and Lifestyle Inventory (Winston & Miller, 1987), and (c) Multidimensional-Multiattributional Control Scale (Cox, 1979). These three surveys were administered at the end of the second year of this study, as part of a college-wide assessment of the student experience. Retention information for the study group was compiled for both the first and second year of college. Kanoy and Bruhn (1996) found that living-learning community (LLC) participants achieved higher GPAs than did students living in other residence halls during their freshman year (LLC=2.91 versus 2.47/Fall semester, and 2.87 versus 2.60/Spring cumulative). Living-learning community students performed better than their predicted GPA each semester in the study, and significant differences also occurred after the third and fourth semester (p. 15). Not only did the control group earn lower GPAs than did the living-learning community participants, they also under-performed their predicted GPAs in all four semesters studied.

In their review of data drawn from the student surveys mentioned earlier, the authors found that students participating in the living-learning community program achieved higher GPAs than the control group in each of the four semesters studied, while "not studying any more than the matched students" (p.18). They concluded that it was likely that the living-learning experience with its emphasis on involvement with others in academically purposeful activities gave participants a boost as they transitioned to college, and helped them achieve higher GPAs.

The researchers suggested that differences in academic achievement between the two sample groups may be attributable to their levels of involvement, and to the structured support they received from their peers. They also acknowledge that it is possible that self-selection and other factors related to student motivation may have been significant variables with this study's findings. Therefore, it is not surprising that Kanoy and Bruhn (1996) suggested that future research on outcomes associated with living-learning community participation "needs to examine what factors might motivate students to participate in such a program and what impact these motivating factors have on program success" (p. 21). Edwards and McKelfresh (2002) studied the effects of living-learning community participation on the academic success and persistence of first-year students enrolled in the College of Natural Science (CNS) at an unidentified university. The living-learning community program involved in this study offered enhanced opportunities to join study groups, use tutorial services, interact with faculty members and academic staff, and participate in social and educational programs in their residence hall. Eighty-one CNS students in the living-learning community program and 261 CNS students living in a conventional residence hall constituted the sample group. The researchers reported that to be eligible for selection to this study, the students had to have been enrolled in the CNS, been a first-year student during the 1998-1999 academic year, attempted to take credits during the fall semester of the 1998-1999 academic year, attended the University during the spring semester of 1999, and been living in the University residence halls during the spring semester of 1999 (p. 397).

Academic success was measured by GPA achievement and persistence, which in this study consisted of continuing at the university, continuing within the same major in

CNS, and continuing to live in a residence hall form the first to second year of college. To accurately identify the impact of living-learning community participation, the study included controls to account for the impact of sex, ethnicity, and previous academic achievement reported outcomes.

Edwards and McKelfresh (2002) found that participation in the living-learning community had a positive impact on (a) the academic success of men, (b) the rate of persistence for non-white students at the university (89.47% versus 75.68%), and (c) the rate of persistence of male students in the residence halls (64.1% versus 13.7%). The authors suggested that their study supports the work of Pascarella, et al. (1994) and other researchers who have concluded, "living-learning communities have a positive impact on students' academic success and persistence...[and supported] students that typically appear to be marginalized in higher education" (p. 400). They pointed to the gains seen in male student GPA, and non-white student persistence to the university as the measures of these benefits.

In summary, this literature suggests that living-learning community programs can have a significant impact on the academic achievement of students. Each of the six studies discussed in this section demonstrated that students who participated in these programs earned higher GPAs and persisted in school in greater numbers than non-participants. Although these studies were conducted over a twenty-four year span and involved different types of institutions and student sample populations, they have much in common that merits discussion. Each of the studies shares a common definition of academic success, with GPA performance and persistence in school as the two primary success variables. There is a clear relationship among the studies' review of the

literature, and study designs. In fact, three studies cite Decoster's (1968) work, and the more recent studies mention Astin (1977, 1884, 1993), and Tinto's (1982, 1988) work in their discussion of the literature. Although there was great variety among the living-learning community models and the survey sample with these studies, they all involved students living together in environments that were designed to emphasize academic success.

With the exception of Decoster (1968) each of the studies involved an experimental group comprised of students who self-selected to join a living-learning community, and most studies used a random sampling technique to create a comparison group. Each of the studies involved a sophisticated methodology to attempt to control for academic ability, and they considered factors such as ACT scores, and high school performance in these controls. The findings related to academic achievement are very consistent across the six studies, despite the fact that the research is conducted on diverse populations, including high ability, average ability, male-only, and female-only students populations. In fact, all six studies demonstrated a pattern of difference between the experimental and control groups with living-learning community participants performing better, and with the exception of Duncan and Stoner (1976) and Blimling and Paulsen (1979) all studies showed statistically significant differences on GPA attainment. Although this is not a comprehensive discussion on the strengths of these studies, each of these factors do contribute to a perception of coherence and credibility with this research.

On the other hand there also are several concerns with these studies that merit discussion. It is important to note that with the execption of Blimling and Hample (1979) each of these studies involve very small survey samples, and each study involved

different types of students. Blimling and Paulsen's (1979) study involved only 22 first-year, sophomore, and junior class male students in their experimental group. Kanoy and Bruhn (1996) study involved 84 female students of which only 29 constituted the experimental group, and Edwards and McKelfresh's (2002) study involved 81 students who were enrolled in a specific academic major in their experimental group sample. As well, only Blimling and Hample (1979) and Kanoy and Bruhn (1996) conducted their studies on more than one occasion and beyond one full academic year. Therefore, care should be taken to not generalize the results of these individual studies beyond the students in these particular programs at the time of the research.

It also should be noted that the living-learning community programs involved in these studies varied greatly with some offering students little more than the opportunity to live together in an environment that emphasized academic success (Decoster, 1968; Duncan & Stoner, 1976), to others offering specialized academic programs and services (Blimling & Paulsen, 1979; Edwards & McKelfresh, 2002). Because these programs vary greatly on the types of programs and services offered, it is important to note that the literature is not clear on which program features contribute to the outcomes students derive through participation.

Each of the studies discussed in this section of the literature was conducted at a single institution, and in the case of Kanoy and Bruhn's (1996) research a very small, women's college in the Southeast region of the country was the site. It is possible that the mission, culture and administrative structures of that institution, raise serious questions about generalizing the findings in that study to other types of institutional

types and settings. Therefore, questions remain regarding the likelihood of similar results being replicated with living-learning community programs on other campuses.

Finally, each of these six studies involved programs in which students self-selected to join. None of the studies incorporated a methodology that controlled for variables such self-determination and motivation; therefore, it remains unclear if the outcomes discussed in this section arise from the most motivated students electing to join program, versus the impact of participation in these programs.

Intellectual Development

Pascarella and Terenzini's (1991) review of the literature on living-learning participation suggested that "student participants in such programs show significantly larger gains in intellectual orientation than do students in traditional curricular programs" (p. 245) (Bennett & Hunter, 1985; Magnarella, 1975; Newcomb, Brown, Kulik, Reimer & Revelle, 1971). Newcomb, Brown, Kulik, Reimer and Revelle's (1971) study involved a review of outcomes associated with student participation in the Residential College (RC) program at the University of Michigan, in 1967-1970. The RC program was designed to do a better job achieving the objectives of liberal education than is ordinarily possible in large conventional undergraduate colleges. The college had been planned to enhance student peer relationships and to promote frequent and informal contacts with faculty in a living-learning environment. The theoretical assumptions that were involved in the creation of the program were "(1) Potentially influential peer groups tend to arise out of frequent interaction, which in turn is facilitated by propinquity, and out of existing similarity of important interests and attitudes. (2) Such

groups tend in fact to be most influential when they are relatively small, homogeneous (in certain but not all conceivable ways), and relatively isolated from counter-influences" (p. 114). The researchers hypothesized that because of the more informal living and studying arrangements at their college, RC students would be more satisfied with their faculty, administrators, and fellow students, and that the environment of the RC would be more conducive to student growth and development than that of the larger university.

It is important to note that the researchers with this study do not provide a background on the size of their survey sample, nor do they discuss the selection process they employed to derive their sample. This omission raises serious concerns regarding the validity of their data. Nonetheless, the researchers reported that they anticipated that the students drawn to the Residential College might be distinct from those entering the larger, conventional units of the university. Therefore, a control group of students enrolled in the College of Literature, Science and Arts (LSA) was established, and a pretest was conducted to compare the survey sample on characteristics relating to the psychometric scales of the College Student Questionaire (CSQ) and the Omnibus Personality Inventory (OPI). This pre-test determined that there were significant differences between the two groups, with RC students "scoring significantly higher on Peer Independence, Liberalism, and Cultural Sophistication (all from CSQ) and in Thinking Introversion, Theoretical Orientation, Estheticism, Complexity, and Autonomy (from OPI scales)" (p. 104). Based on these findings and with their review of students applications to the RC program, the researchers concluded that the 1967 entering class of living-learning program participants were more intellectually oriented than students

choosing other programs. They also concluded that the RC and LSA students were very similar with regard to sociability scores and interests, and adjustment measures.

During the post-test phase of the study the researchers found that RC participants were much more satisfied than the LSA population with their faculty, students, and administration as measured on the CSQ scales. They also reported that "RC students are more likely than LSA students to say that their faculty is composed of superior teachers, who are genuinely interested in their students' personal and academic progress" (p. 116).

To study personal growth and development of students involved in the RC, the researchers applied Newcomb's (1943) theory of accentuation, which proposes "that initial personality differences in the two student populations under consideration would increase where those differences were relevant to the college experience" (p. 115). The results of the post-testing involving the CSQ and OPI instruments showed that Residential College had changed more in the expected direction than LSA students on twenty of the twenty-four comparisons involved in the surveys. Significant growth was seen among RC students in several significant areas of development relating to intellectual outcomes, including, (a) cultural sophistication, (b) theoretical orientation, (c) estheticism, (d) intellectual orientation, and (e) social conscience. The researchers suggested that this data indicated that the living-learning community program had a greater impact and served to accelerate basic developmental trends, more than the LSA control group.

In 1973 the University of Vermont established a living-learning community designed to facilitate a variety of faculty and student-designed programs "composed of different-sized groups who wish to live together because of mutual commitments to

develop shared academic, intellectual, or sociocultural interests" (Mangarella, 1975, p. 301). The program was located in a newly constructed housing complex, called the Living-Learning Center (LLC), that accommodated 600 students total, and was designed to provide ample social and academic program space. Faculty members who taught in the program were provided office space, and some were provided a residence in the facility. Within this larger complex, 13 different living-learning community programs were offered during the first year, and 196 students self-selected to join one of these programs.

Magnarella (1975) who served as a faculty member in the living-learning community (LLC) in 1973 reported that the 196 LLC "student residents constituted the most diversified population of any residence hall. All four undergraduate classes, plus all the university's colleges and schools...were represented" (p. 302), and almost all classes were represented in approximately the same proportions as in the university as a whole (p. 302). A survey was distributed to all 600 residents of this new housing complex, during the Spring semester, and 472 students, approximately 82% of the total surveyed responded. Also, 149 of the 196 participants in the living-learning community programs responded to the survey, which represents approximately 76% of this population. The instrument was designed to study how the new residential community compared to other campus residence halls, whether the 196 students participating in the living-learning community programs found their experiences more academically and intellectually rewarding than the LLC students who were not participating in such a program.

Magnarella (1975) indicated that approximately 71% (334) of the LLC survey respondents had resided in other university halls during the previous year. Nearly two-thirds of that group were not LLC participants, and they had not self-selected to reside in that facility. Rather, they had been placed in the LLC because their previous hall had been closed or converted to other student group use. He suggested, correctly, that his study was enhanced because self-selection to the LLC facility was not necessarily a strong factor in student perception and response to the survey.

A substantial majority of the total 472 survey respondents indicated that the living accommodations, extracurricular activities, community spirit, educational opportunities and intellectual atmosphere of the living-learning community was better than their previous residence hall (p. 303). Ninety-one percent of the total 472 survey sample said the program provided an atmosphere that was more conducive to holding serious discussion, (p. 303), 59% said they frequently discussed academic or intellectual subjects in setting outside of the classroom (p. 304), and 51% of the students who had lived elsewhere on campus the previous year said they engaged in these two behaviors more often in the LLC.

A comparison of responses between the 323 LLC residents who were not involved in a living-learning community program, and the 149 program participants was conducted with controls for demographic characteristics and no significant differences were found. When asked whether residing in the LLC contributed to their "intellectual growth and the attainment of personal education objectives" (p. 304), 78% of the living-learning program participants replied affirmatively, versus only 56% of the students who were not in a program. Statistically significant differences were observed between the

two groups on two important variables with this study. LLC program participants reported that the LLC facilitated greater opportunities for holding serious discussion than did non-LLC students (95.2% in program to 88.8% not in program), and provided greater opportunities for discovering new ideas (77.6% in program versus 64.3% not in program).

Magnarella (1975) noted that LLC program participants gave a higher percentage of favorable replies than their peers who were not in a program because "students living and working together because of their mutual commitment to develop common educational interests are more likely to attain their personal objectives, experience intellectual growth, engage in serious discussions, participate in extracurricular activities, and discover new ideas than are students who reside together by chance or for social reasons only" (p. 305).

Bennett and Hunter's (1985) research involved undergraduate students who elected to participate in the Women Involved in Living and Learning (WILL) Program, as first-year students at the University of Richmond in 1980. WILL was a "four-year developmental program for liberal arts students designed to help undergraduate women define goals, develop self-knowledge, and learn skills useful after college" (p. 3). During the first and second years of the study, participants enrolled in one academic course together each semester. Each of the four courses focused on contemporary women's issues related to identity, women in the workforce, and legal issues which affect women's lives. Participants were involved in an internship during their junior year, and they enrolled in a "Life Planning Seminar" during their senior year. WILL program participants also were involved in a monthly seminar series in their residence hall.

In the Fall of 1980, 16 entering freshmen were accepted into the program, and the total number of accepted students grew to 100 by Fall 1984, and Bennett and Hunter's (1985) study sought to assess the effects of the first four years of the program on the women who participated. The researchers suggested that "a control group has been identified in each of these classes to facilitate an ongoing monitoring of the program" (p. 4). Unfortunately, no additional information is provided in this article regarding control group sample size, or selection methodology. They employed the Omnibus Personality Inventory (OPI), the Attitudes Toward Women Scale (ATWS), and an individually designed survey and Senior Exit Interview to study student attitudes, opinions, and feelings on a variety of issues related to their college experience, their attitudes towards women, and their opinions of the WILL program.

The researchers found that the WILL participants were much more intellectually oriented than the control group student, and that the WILL students were more interested in aesthetic pursuits such as music, art, and literature than the control group. They also found that WILL program students "were more outgoing, preferring social contact and relating to other people in social context" (p. 6), than the control group students.

Results from the Attitude Toward Women Scale suggested that WILL students had significantly higher scores, which reflects more liberal attitude toward women. The researchers also pointed out that the instrument was administered to the 1982 and 1983 freshmen WILL students and control groups and the mean scores of the two groups were not significantly different. They suggested that the WILL program may have influenced students' attitudes toward women and their societal roles (p. 8).

The results of the WILL program survey and exit interview suggested that the coursework, the Internship experience, the association with professional women, and the friendships that resulted from these experiences were regarded by students as successful and valuable components of the program.

Based on these findings Bennett and Hunter (1985) suggested that the WILL program is "strong and vital and is meeting the needs of the students who are participating in it" (p. 10). They also maintained that the program (a) effects student's attitudes towards women, (b) increases the level of autonomy of participants, (c) enhances students' abilities to make career decisions, and (d) provides skills that are applicable and useful in "the professional and business worlds they will enter after college" (p. 11).

Pascarella and Terenzini (1991) wrote that while a substantial amount of research has addressed ways that residence halls can be structured to enhance academic achievement and the social integration of students, "surprising little has addressed the influence of residential living on the development of more general cognitive skills" (p. 151). This study's review of the literature found only three articles on this topic and this adds credibility to Pascarella and Terenzini's suggestion that there is a significant gap in the literature in this area of study. While the three studies highlighted in this section do not cite each other's work, Newcomb and his colleagues (1971) and Magnarella (1975) discuss a common body of literature and research. One particular area of strength with these studies results from the fact there clearly is agreement between the researchers on variables that constitute intellectual development with college students, and how to

measure growth, as both Newcomb and his colleagues (1971) and Bennett and Hunter (1985) employed the Omnibus Personality Inventory (OPI) with their studies.

It is important to note that the three living-learning communities discussed in this section varied greatly regarding populations they served. Newcomb's (1971) study involved only "high ability" first-year students, and Magnarella's (1975) and Bennett and Hunter's (1985) work involved "average ability" students across all undergraduate years. However, the three living-learning communities did have several important features in common. Each of the programs involved students taking several classes together, frequent faculty with student contact in academic and social settings, and each program offered highly specialized academic and social programs and services to students. Also, students self-selected to participate in all three programs. Because these studies have much in common and were conducted at different types of institutions and with different student populations over a fifteen year span, it appears that the same conclusions can be reached by using a variety of methods.

Magnarella's (1975) study involved a large survey sample, a strong response rate, and he employed a sound methodology with comparison group selection. These factors serve to increase the validity of his findings including that living-learning program participants (a) enjoyed greater opportunities for holding serious discussions, and (b) they enjoyed greater opportunities for discovering new ideas than non-participants. However, since this study involved a one-time survey of a single program care should be taken to not generalize the results of this study beyond the students in this particular program at this time of the research.

Unfortunately, it is not clear in this literature if the other two studies fully satisfied research methodology standards with the selection of their survey samples. Newcomb and his colleagues (1971) briefly mentioned sampling in their study, but no information regarding sample size and selection methodology is provided to the reader. Bennett and Hunter (1985) also did not discuss comparison group size and selection methods in their study. The absence of this background raises serious questions regarding the validity of the data with these two studies. Clearly, the significant gap mentioned by Pascarella and Terenzini (1991) in the literature on living-learning community participation and intellectual development results both from too few studies on the topic, and from the possibility that several of the studies mentioned in the literature may be seriously flawed.

Involvement with Faculty and Peers

Many living-learning community programs emphasize and facilitate student and faculty interaction, which has been shown to promote student academic integration, persistence, and satisfaction with the college experience (Clarke, Miser & Roberts, 1988; Pascarell & Terenzini, 1981, Pike, 1997). Astin (1985) argued that student and faculty interaction is a particularly important outcome and an important determinant of student success as "frequent interaction with faculty members is more strongly related to satisfaction with college than any other type of involvement, or indeed, any other student or institutional characteristic" (p. 149).

Research on living-learning communities also suggests that, at least for traditional-age, eighteen to twenty-two year old students, successful integration to

college serves to enhance academic integration (Tinto, 1998). It is believed that social comfort in the classroom helps facilitate learning. The collaborative and intimate nature of learning communities encourages students to become integrated both socially and academically, more than the traditional model of undergraduate education (Arminio, 1994; Henry & Schein, 1998; Meyer Schuh, 2001).

Pascarella and Terenzini's (1981) study on residence arrangement, student/ faculty relationships, and freshman-year educational outcomes was conducted in 1975-76 at a large private residential university. A random sample of 1,008 students was drawn from "the population (N = 2,400) of incoming freshmen." In July 1975, these students were sent a questionnaire designed to assess their expectations regarding a variety of aspects of the college experience. Usable responses were received from 766 students who subsequently enrolled at the university. A second questionnaire was sent to these students in March 1976 seeking information on their experience. This methodology yielded a sample of 567 freshman students, 74 of whom self-selected to participate in the Experimental Living-Learning Residence (LLR) and 493 of whom elected to reside in a conventional residence hall during their freshman year. The LLR program was designed to test (a) hypothesized differences in social-psychological relationships between conventional first-year student living arrangements and the experimental program designed to enhance student/faculty interaction, and (b) determine if the effects of residence arrangements on a range of outcomes were accounted for by the interaction between these groups.

LLR Program features included dedicated space for academic uses such as seminar and study rooms, a computer laboratory, and offices for academic staff. The program also included academic credit courses taught in the facility.

A multivariate analysis of variance test determined that there were no significant differences between the LLR students and those in sample who chose the conventional residence hall on any of the pre-college characteristics, which included academic aptitude, high school achievement, parents' education, expectations of academic program and nonacademic life and expectations for contact with faculty (p. 151). While self-selection to the LLR program led to some pre-enrollment differences between control and sample group, this test determined that the difference was statistically insignificant.

Multiple linear regression was used to determine differences in (a) the frequency and quality of student/faculty informal relationships, (b) the pre-enrollment characteristics plus the residence variable, and (c) how the LLR program is accounted for or mediated by the interpersonal relationships between faculty and students.

Pascarella and Terenzini (1981) found that LLR students had a significantly higher frequency of contact with faculty in matters relating to academic advising, socializing, discussing career concerns, intellectual matters, and campus issues. They found that "LLR students had significantly higher academic achievement, were significantly more likely to persist into their sophomore year and had significantly more positive attitudes toward their academic program"(p.152), than the control group students. There were no reported differences between these two groups on the variables of intellectual development, personal development and general satisfaction with nonacademic life.

The study also found that frequency of contact with faculty with regard to intellectual and career-related concerns were the relationship measures with the strongest positive correlation to persistence, GPA attainment, and positive attitude toward an academic program. LLR students ranked interaction with faculty significantly higher as a source of personal satisfaction and ranked faculty significantly higher as an influence on personal development than did students who lived in a conventional residence hall. Pascarella and Terenzini (1981) also reported that the student with faculty interaction measures significantly differentiating LLR and CR students also seemed to account for the differences in outcomes, not the other features of the program.

Clarke, Miser and Roberts' (1988) study on the effects of living-learning structure, faculty involvement, and thematic focus on student outcomes involved 197 first-year students, from eight residential units at a medium-sized, comprehensive university. These students were selected for the sample population based on their assignment to one of the eight residential units involved in the study. However, it is not clear if they were randomly selected from the total number of residents assigned to each of these programs or if they represent the total number of students assigned to each of these living units. The researchers did indicate that 115 students in their study were assigned to conventional halls and 82 were participants in living-learning halls. The eight residential units were selected

> to represent the three variables in question: (1) living-learning structure, (2) faculty involvement, and (3) declared themes,...and to ensure that the group of eight units represented the range of options available to freshmen, thereby creating appropriate comparisons for each approach to residential programming.(p. 7)

The intent of the research project was to study the effects of each of the programs with regard to student responses to "opportunities for community involvement, social involvement, vocational development, and academic involvement on the campus"(p. 8). The survey was derived from existing surveys of student responses to college (Pace, 1984; ACE, 1982).

The authors found that among other things living-learning program students were more likely to (a) consider changing their career choice, (b) spend time in career and personal counseling, (c) perceive progress in their academic development, (d) value cultural events, (e) be satisfied with their opportunities to sample courses, and (f) report making more progress in developing social skills than first-year students in conventional residence halls (p. 9). They also found that living-learning program participants were less likely to spend time watching TV, and they reported less progress with learning to manage their time effectively than students in the comparison group.

Students who resided in a residence hall with structured faculty programs (a) had higher expectations for being satisfied with college, (b) spent more time talking with friends, (c) were more satisfied with required general education courses and their contacts with the faculty, and (d) reported spending less time alone, than did students who resided in a conventional residence hall.

Students who participated in a residence hall with a formal theme (a) spent more time in formal study groups, (b) made more progress in participating in class discussions, (c) were more satisfied with required general education courses, (d) were less likely to make career development a high priority, (e) spent less time watching TV, and (f) reported less satisfaction with their relationships with friends, than students who resided

in a conventional residence hall. This study demonstrated that faculty contact in the residence halls was associated with an impressive list of positive outcomes including "higher expectation of satisfaction with college" (p. 11). As well, student involvement in a residence hall with a declared theme was "linked to more intense academic involvement…appeared to reduce both interest in career development and satisfaction and friendships, perhaps because thematic halls attracted students with a fairly narrow view of their purpose" (p. 11).

Clarke, Miser and Roberts (1988) concluded that living-learning community programs "appeared to have a greater positive impact on students than did the programs in conventional halls" (p.11). They suggested that the living-learning community program on the campus they studied which involves a special facility, increased opportunities for faculty contact and intentional programming appeared to produce "more active engagement with academic aspects of the university experience" (p. 11).

Arminio's (1994) study on the effects of living-learning community participation in the Language Theme Hall at the University of Maryland, College Park, conducted in 1992, involved a stratified sample of 1,000 undergraduate and graduate residents, drawn at random from the approximately 7,000 resident students at that campus. No discussion is provided by the author regarding the rationale and methodology employed with survey sample selection.

One survey instrument used in this study was the campus' Residence Hall Evaluation Project (RHEP) instrument, which measured student perception and behaviors related to (a) community living, (b) physical environment and facilities, (c) safety and security, (d) dining services, and (e) residence life staff and services.

Resident Assistants distributed the RHEP surveys and residents returned the anonymous survey to staff in sealed envelopes. The survey response rate for the full sample was 89.3%, or 893 students. A second survey was distributed in March 1992 to the Language House residents, and Arminio (1994) reports that of the 91 surveys distributed, 64 usable surveys were returned (70.3%). It also is unclear in the researcher's methodology discussion if the 91 students surveyed in the Language House represent the full number of participants with that program, or if they were a sub-set of that group. Data from this survey were analyzed to study student satisfaction level within the living-learning community, satisfaction with overall college experience, and its correlation with students' level of involvement in the Language House.

Arminio (1994) found that living-learning community students were generally more positive toward their community living experiences than control group students. In particular, they noted that their residence hall was a place where they (a) met people from different racial backgrounds, (b) engaged in intellectually stimulating activities and discussion, (c) attended programs where faculty interacted with students in the residence hall, and (d) felt that other residents cared about them (p. 14). Living-learning community participants were also more positive about the type of accommodations and conditions of facilities they experienced, they expressed higher levels of satisfaction with the quality of the staff and services on campus, and they were more satisfied with and reported being more likely to support the security systems in their residence than the control group students.

Arminio (1994) concluded that the Language Theme Hall students were "more satisfied with their living experience than residents living in conventional residences

halls of similar size and style" (p. 15). She also suggested that this living-learning program which offers an integrated experience where academic, social and recreation spaces and activities are provided in one facility enhance students' experiences, and their perception of the institution was correlated with increases to their satisfaction level.

Based on the results of the second survey of only Language Theme Hall students, Arminio (1994) found that the residents who were most satisfied with their experience in the living-learning community program

> were those who also were involved in the intent of the facility—language and cultural immersion…It appears that interest and involvement in the theme (in this case language acquisition) has an impact on satisfaction levels of living-learning center residents. (p. 16)

Pike's (1997) study on the effects of residential learning communities on students' experiences and learning outcomes involved 3,845 first-time college students at the University of Missouri—Columbia. In the Fall semester of 1995 the College Student Experiences Questionaire(CSEQ) was mailed to all of these students, and 1,085 students returned the survey, which represents a response rate of roughly 35%. Pike (1997) reported that 626 surveys provided by 1,085 respondents served as the data set with his study. The remaining 459 surveys were not included either because the respondents resided off-campus or they identified as international students. Also, students for whom complete background data including sex, ethnicity, ACT assessment scores and high school case percentile rank were not available were excluded from the study. One hundred and fifty seven students, or 26% of the 626 total sample participated in a living-learning community, and 469 students, or 74% of the sample resided in a traditional residence hall. Pike (1997) reported that a higher percentage of students responding to the CSEQ were female (71%), and students who responded to the survey also had higher

ACT Assessment composite scores (25.9) and slightly higher high school class percentile rank (84.2) than all first-time college students at the university. He also reported that a comparison of the background differences among students in the survey sample revealed several differences between living-learning community students and students in traditional residence halls (p. 5). In particular, 75% of students in traditional residence halls were female, compared to 66% of students in living-learning communities. Also, students in the traditional residence halls had significantly lower ACT Assessment scores (25.7) than did students in living-learning programs (26.9).

A factor analysis test derived ten scales relating to student responses to the CSEQ. These scales were used to represent students' college experiences and educational gains made during the first year of college. Additional data analysis involved one-way analysis of variance procedures to study absolute differences in experience between the two groups. Pike (1997) found that participants in living-learning communities did have significantly higher levels of involvement, interaction, integration, and learning and intellectual development than did students in traditional residence halls (p. 9). The study also suggested that living-learning communities tended to exert a positive direct effect on day-to-day behavioral aspects of students' experiences and indirect effects on the integration of information and student learning. The third finding that emerged in this study concerned the nature of the indirect effects of learning communities on integration and student learning and intellectual development. In particular, Pike (1997) found that residential learning community participants reported higher levels of (a) integration of course information into their lives, (b) integration of

course information into conversations, (c) greater gains in general education than did those students who resided in a traditional residence hall.

Pike (1997) concluded that students' out-of-class experiences can have a positive effect on learning, and involvement and interaction with faculty and peers on academically purposeful activities has a direct impact on learning and intellectual development. He also suggested that residential learning communities represent one method to integrate students' academic and social lives and promote learning.

Henry and Schein's (1998) study involved two residence halls at a large, public, research university; one housed a living-learning community (LLC) program and the other was a conventional residence hall. The authors' purpose was to "see if an LLC makes a difference in the way students perceive their residence hall" (p. 9). The distinctive features that differentiate the LLC program from conventional halls are (a) thirty to forty-five small, interactive classes taught in the facility each year, in-hall faculty office hours, on-site academic advising and tutoring services, and social and educational programming for residents.

Previous attempts to conduct random sample surveys on this campus had produced low response rates, so the researchers conducted a non-random sample study. Surveys were distributed by three research assistants in two respective residence halls' dining rooms during a single dinnertime. The two buildings involved in this study provided housing for approximately 1,105 undergraduate students. One building in the study (Allen Hall) was organized as a living-learning community, and the other (Weston Hall) was described as "representative of all University residence halls" although no living-learning program exists in that facility. The researchers reported that all 74

students in each of the two buildings who were asked to participate in the study, completed the survey, for a total sample of 148 students. Although they employed a non-random sampling method, and this may inhibit generalizing the findings, Henry and Schein (1998) highlighted that the demographic characteristics of the sample was "representative of the university population living in the residence halls" where they conducted their study.

The survey instrument had twenty-one items, and attempted to measure student perception in the following thematic areas (a) knowledge of available residence hall programs, (b) affective or emotional responses towards the residence hall, (c) participation levels in the residence hall's formal and informal activities, and (d) friendships and social support available in the hall. A factor analysis test reduced the twenty-one items on the survey into three scale group—general attitudes about one's residence hall, opinions about in-hall academic programs, and satisfaction with in-hall social life.

The authors found no significant difference with regard to attitudes about their residence hall between participants in the LLC and students in a conventional residence hall. However, significant differences between the two groups were found on two of the other scales. LLC students were more aware of academic programs, participated more frequently in them and were more satisfied with their quality, than the survey sample drawn from the conventional hall (pp. 11-12). As well, LLC students were more involved in social activities, reported feeling more accepted and welcome, and had fewer negative comments about their social life than students in the conventional residence hall sample (pp. 11-12).

Henry and Schein (1998) concluded that "an enriched academic environment in a residence hall promotes more then just an affective response; it promotes feelings of inclusivity, in a setting that is perceived to be academically involving"(p. 12). They suggested that the differences in academic and social responses between the two groups "can be explained partially by the nature of the programming, both academic and cocurricular, which is unique to the living learning program" (p. 13). In particular, they stress that the credit courses that are offered in the LLC emphasize interaction between students and with faculty members both in and outside the classroom setting. This promotes an enriched academic and co-curricular experience for students, and when this option is provided to a motivated group of students it is not surprising that there are reported gains in academic and social integration and satisfaction levels.

A qualitative research study at Iowa State University on student motivation to join, and the outcomes associated with participation in, an Agriculture Community Encourages Success (ACES) living-learning program was discussed by Meyer and Schuh (2001). This program offered first-year students the opportunity to live and enroll in classes together, and receive academic support services in their residence hall. Programs offered in the community included opportunities to interact with faculty and join peer study groups. Forty students elected to join the program in the Fall semester of 1999, and a total of thirty students returned for the Spring 2000 semester.

The investigators were particularly interested to learn why students had elected to join the living-learning community, and what they perceived as the benefits of the program. Three focus groups were conducted in Fall semester 1999, with a total of 18 participants, and a second round of focus groups were conducted with 15 of the original

participants early in the Spring 2000 semester. The investigators employed several standard qualitative research techniques including prolonged engagement, member checking, and peer debriefing to establish rigor with their methodology.

Meyer and Schuh (2001) found that students chose to participate in the program to obtain immediate help with classes, meet new people and make friends, to have access to more resources, and as a means to connect with the larger university. Several students also mentioned that the program was located in a newly renovated building that they viewed as an attractive place to live.

Participants reported that taking classes together was a primary benefit, that led to the formation of peer study groups. They mentioned that because they lived, studied and enrolled in classes together, they were able to form friendships easily.

Students did not discuss specific gains with learning that resulted through participation in the program. "Regardless, they unanimously reported they would have participated in the learning community knowing what they knew after one semester's participation" (p. 47).

Meyer and Schuh (2001) argued that the ACES program succeeded in providing students with a point of connection to the university, assisting students with forming friendships, and in providing academic support structures to participants (p. 47). They attributed these outcomes to the linked courses and the clustered living arrangements of the living-learning program. Seemingly, living together and sharing common coursework allowed these students to make friends easily, form study groups, and seek assistance with understanding and completing coursework (p. 48).

The six studies reviewed in this section suggest that living-learning community programs that emphasize and facilitate student involvement with faculty and peers can lead to gains in academic and social integration, and satisfaction with the college experience. Although these studies were conducted over a twenty-year span and involved different institutions, program types and student populations, they also have much in common that merits discussion.

There is a clear relationship among the six studies' review of the literature, and with their research design. For example, Arminio (1996) cited Clarke and his colleagues' (1988) study, and Pike (1997) referenced Pascarella and Terenzini's (1991) work. In total, four studies cite research that is included in this study's general literature review on living-learning communities. Therefore, it is not surprising that there is a clear agreement on many of the factors that relate to academic and social integration, or that these studies employ many of the same survey variables to measure the level and quality of student interaction with faculty and peers.

Many of the findings related to academic and social integration are consistent across these studies despite of the fact that the research is conducted over a twenty year span, and involved diverse populations. Each of the studies demonstrated a pattern of difference between the experimental and control groups with living-learning participants enjoying more favorable outcomes than the comparison group students. These differences included levels of, (a) interaction with faculty and other students, (b) involvement with student groups and activities, satisfaction with college experience, and (d) student perceptions of integration of academic, social and personal dimensions of their college experience. With the exception of Meyer and Schuh's (2001) qualitative

research design, each of these studies involved an experimental group of students that self-selected to join a living-learning community, and the majority of the studies used a random sampling technique to derive their sample population. These studies also demonstrated that many of the same academic and social integration gains associated with living-learning community participation can be derived by a variety of program strategies, and that a variety of research methodologies can be employed to study these programs.

On the other hand there are several concerns with these studies that merit discussion. It is important to note that in every case these studies involved small survey samples, particularly with regard to the experimental group. The only exception to this is Pike's (1997) study, however, the lack of information on experimental group population and response rate in his study raises serious data validity questions as to whether the respondents are truly representative of all first-year students and living-learning program participants at the institution where he conducted his research. Pascarella and Terenzini's (1981) study involved 567 students, however, only 74 of these students comprised the experimental group. Clarke and his colleagues' (1988) research involved only 197 students with only 82 in the experimental group, and Arminio's (1994) study included 64 students in the experimental group.

Both Arminio's (1996) and Henry and Schein's (1998) discussion of their research raised serious questions about their survey sample methods. Arminio (1996) indicated that her study involved a "stratified random sample of 1,000" residents selected from among the approximately 7,000 students who lived on-campus. Unfortunately, no additional information is provided on the rationale for using a stratified sample, or the

characteristics on which the stratified sampling was constructed. Therefore, serious questions remain as to whether the sample population is truly representative of the student population where she conducted her research, and if the findings in Arminio's (1996) study are representative and can be generalized to other students. As well, Henry and Schein (1998) indicated in their study that previous attempts to conduct random sample studies on their campus had "produced such low response rates that a nonrandom sampling method was used" in their research. (p. 10) Clearly, this use of nonrandom samples violates assumptions by using inferential statistics with this study. Therefore, it is not surprising that Henry and Schein (1998) acknowledged that the sampling technique they employed limited the "generalizability of the results" to other students and programs where they conducted their research.

Finally, each of these six studies discussed in this section of the literature were conducted on only one occasion during a single academic year. Because these are all one-time studies, involving special programs on individual campuses, and because the experimental groups are small and with the exception of Clarke' and his colleagues' (1988) work are drawn from one program, care should be taken to not generalize findings to all other programs.

Summary

In summary, this review of the research suggests living-learning communities of various types can have a positive effect on academic achievement, and the increased levels of involvement and interaction with faculty and peers that some of these programs provide can have a direct impact on learning and intellectual development. The literature

also suggests that living-learning community programs help to integrate students' academic and social lives and promote learning both within and outside of the classroom setting. It also appears that programs that successfully integrate students' academic and social lives have a positive influence on student satisfaction with their living experience specifically, and their college experience in general.

Although the findings of thirty years of research raise several interesting possibilities about the potential for living-learning communities to enhance undergraduate education, care must be taken to not over generalize the results. Each of the studies discussed in this section was conducted at a single institution, therefore, questions remain regarding the likelihood of similar results being replicated with living-learning community programs on other campuses.

As well, with the exception of Blimling and Hample (1979) and Kanoy and Bruhn (1996) the outcomes discussed in this literature were derived from one-time studies, with results representing a snapshot in time, that may not be replicated with other groups of students, or with the same students at different points in time. In his study, Pike (1997) wrote, "had measures of involvement, interaction, integration and learning been taken at different points, it is possible that the effects identified in this study would have been different"(p.10). His comment is germane to each of the studies in this review.

The majority of studies in this review attempted to control for differences between the experimental and control group population on various characteristics such as sex, race, and academic ability. However, no study established a methodology to control the variable of self-selection to participate in these living-learning community programs.

Therefore, while it appears that participants in these programs derived a variety of benefits, it is unclear whether these outcomes result from participation in the programs, or from student motivation and self-determination. Therefore, even with thirty years of research on this topic questions remain on the living-learning community programs, student selection, and the true cause of outcomes.

Finally, it is important to note that in this extensive review of the literature only Clarke and his colleagues' (1988) and Pike's (1997) research involved students from more than one living-learning community in their experimental group, and the great majority of the living-learning communities selected for study involved programs that incorporated increased staffing, enhanced programming and specialized academic services for students (Arminio, 1994; Bennett & Hunter, 1995; Blimling & Paulsen, 1979; Clarke, Miser & Roberts, 1988; Duncan & Stoner, 1976; Edwards & McKelfresh, 2002; Henry & Schein, 1998; Kanoy & Bruhn, 1996; Magnarella, 1975; Meyer & Schuh, 2001; Pascarella & Terenzini, 1981). These two factors reinforce Linblad's (2000) argument that most of the research on learning community outcomes has involved "higher-end" more resource dependent programs, and Stassen's (2003) perspective that "some of the most positive and widely disseminated results on the impact of learning communities are derived from data that did not include a full sampling of the learning communities on the campus studied" (p. 6). Therefore, new research on the outcomes associated with living-learning community participation must consider the following questions: a) Would the results of each of these studies been different had the sample included the full range of living-learning communities on that campus? and b) Are the positive outcomes generally attributed to living-learning communities actually the result

of a small number of model programs that receive full attention and support, and not the full range of programs that actually exist on the campus studied?

CHAPTER 3

STUDY DESIGN AND RESEARCH METHODS

This chapter describes the methodology and the data analysis techniques used to conduct this study. The chapter also details the research questions and themes that are explored and summarizes the survey items that provide this study's two data sets.

This study involves a secondary data analysis of administrative data collected by SARIS, the Office for Academic Planning and Assessment, and the Department of Residence Life at the University of Massachusetts, Amherst. Data from two sources is discussed: (a) the Fall Semester 2000 Residential Academic Programs survey conducted by Academic Planning and Assessment and SARIS, and (b) the Spring Semester 2002 Special Interest Residential Program survey administered by the Department of Residence Life. However, further analysis has been conducted only on the latter data set. These surveys represent the first attempts by university administration to study the outcomes associated with living-learning community participation for students in the RAP and SIRP programs. The goals for each survey included documenting student outcomes to broaden understanding of the program's effectiveness, gathering data to inform program development decisions, and providing a baseline of information to guide future research on these programs.

Description of the Living-Learning Community Surveys

The Residential Academic Program Survey, was designed by the Office of Academic Planning and Assessment to study outcomes associated with student participation in RAP living-learning communities. In particular, the survey focused on

"experiential outcomes that the LC literature, as well as those involved with LCs on our campus, suggests are the positive effects of LC experience related to academic and social integration" (Stassen, 2003, p. 599).

On November 28 and December 5, 2000 SARIS conducted the RAP living-learning survey by telephone. The survey attempted to contact a sample of the total 809 students who were enrolled in the RAP, TAP and Honors living-learning community programs at that time. The response rate was 59% (n=477) of all 809 RAP living-learning community program participants. A sample of 530 students who were not in a living-learning community, were randomly selected and the response rate was 62% (n=328).

The five conceptual categories of academic and social integration outcomes that emerged in the design of the RAP living-learning survey included (a) peer interaction around academic work, (b) faculty interaction outside the classroom, (c) positive academic behaviors, (d) positive academic climate in the community, and (e) general social adjustment and integration (Stassen, 2003). Thirty-seven questions were devised to gather data on student experiences and behaviors that relate to the current literature on outcomes associated with participation in living-learning communities. A copy of the RAP survey is included as Appendix B with this study.

The Special Interest Residential Programs Survey, was designed by the Department of Residence Life and the SARIS Office to study outcomes associated with student participation in the SIRP living-learning community programs. The Residence Life department designed their survey to gather data on student outcomes that are particular to the SIRP programs, and on outcomes that are common to both RAP and

SIRP programs. Forty-two questions were devised to gather data on student experiences and behaviors that relate to current literature concerning the academic and social integration outcomes that are associated with living-learning community participation. Twenty-four of the SIRP survey questions were extracted from the RAP survey to facilitate data analysis comparisons among the different programs. The SIRP survey also included a battery of questions concerning student satisfaction with residence hall experiences. A copy of the SIRP survey is included as Appendix C with this study. The SIRP survey was administered by the Department of Residential Life on April 16 and April 17, 2002. The pencil and paper survey was distributed by the Resident Assistant (RA) staff assigned to each of the SIRP programs or comparison group floors. RA staff attempted to hand deliver the survey to a total of 742 residence hall students, in their rooms, over a two-day period. The survey was enclosed in a envelope with a letter requesting that students complete the survey and instructing them where to deliver their completed survey. As an incentive, respondents were invited to attend a pizza party in their residence hall and they were entered into a drawing for several $20 gift certificates at local stores. All 363 SIRP students were contacted and asked to participate in the study, and a comparison group of 379 resident students who were not members of any living-learning community program were asked to complete the survey.

An attempt was made by Residence Life and SARIS staff to identify a comparison group with this study by matching the living environments of the non-SIRP sample to the SIRP participants. In each case staff identified a residence hall floor in the same building as the SIRP, or in a neighboring building to the SIRP program to serve as

the comparison group population. Because many floors and buildings were available, Residence Life staff considered student demographic characteristics such as sex, class standing, and race/ethnicity and selected those locations that most closely matched the SIRP program population to which they would be compared. The response rate for sample students in a SIRP living-learning community was 84% (n=305), and the comparison group response was 78% (n=298). Table 8 includes survey response information and Table 7 includes demographic information on survey respondents (see Appendix A).

Data Analysis

The SIRP survey was developed as a pencil and paper format instrument, and the survey was designed to permit computer scanning and recording of data. The data were transferred to SPSS, a statistical analysis program, and are available at the Student Assessment, Research and Evaluation Office (SAREO) (formerly titled SARIS). The survey data has been coded to facilitate the grouping of each respondent as either a member of a SIRP or of a control group. This organization of the data facilitated the summary of student outcomes for all living-learning community participants and with the control group of students who did not participate in one of the programs. This coding technique also facilitated a report on student outcomes for each of the seven programs included in this study. The survey included demographic information on the variables of race or ethnicity, sex, and class year.

The first step in the data analysis was to compare the demographic characteristics of the SIRP and comparison groups. As expected a statistically

significant difference emerged among SIRP and comparison group samples on race ($p < .001$), and class year ($p < .001$) characteristics of survey respondents. As Table 9 shows, 54.3% of respondents in the SIRP program were White, compared to 65.7% of the respondents in the comparison group, and 30.9% of SIRP participants were first-year students, compared to only 18.3% of the students in the comparison group. The differences between these two groups on the characteristics of race and class year results from a university room assignment policy that emphasizes student choice, and the decision made by many first-year and students of color to participate in the SIRP programs. In particular, many students of color self-select the SIRP programs that emphasize the exploration of race, ethnicity and culture. As a result, the Asian/Asian-American, Harambee, Nuance, and Native American SIRP programs draw a greater percentage of students of color and first-year students than any other conventional floor or building on the campus. Therefore, despite their efforts, Residence Life staff members were unsuccessful in their attempts to identify comparison groups that matched the individual SIRP populations on these characteristics. Table 7 summarizes respondent totals by race, sex and class year in the SIRP programs and comparison groups with percentages reported and numbers listed in parenthesis.

The second step in the data analysis involved a factor analysis to identify groups of survey variables with responses that were strongly related to each other and were indicators of the same, or very similar underlying constructs. This methodology was employed to create scales to measure the behavior and attitudes expressed in the SIRP survey, in addition to a question-by-question review of the data. This approach is recommended in the literature on survey research to increase "the reliability and validity

of the instrument by providing multiple samples for the same attitude within a single instrument" (Henerson, Morris & Fitsgibbon, 1987, p. 133). The seven scales that materialized from the factor analysis have been labeled as follows: Positive Academic Behaviors, (b) Academic Work with Peers, (c) Positive Learning Environment, (d) Diversity Engagement, (e) Residential Experience, (f) Institutional Commitment, and (g) Interpersonal Competence.

Each of the scales that emerged were tested for alpha reliability, using Cronbach's Alpha measure of internal consistency, to determine the degree to which the survey instrument yielded consistent results. This test reports the scale reliability in a range from 0 to 1.0. The higher the score in this range the greater the reliability of the scale. The individual questionnaire items that comprise each scale and each scale's alpha reliability coefficient are summarized in Table 10.

A 5 (class year) x 2 (sex) x 2 (race) between-subjects factorial analysis of variance (ANOVA) test was calculated comparing the mean scores of all seven scales for SIRP participants and comparison group students. ANOVA is used to compare the means of two or more groups, and to determine if an overall difference exists among groups and "which combination or pairs are responsible for the difference" (Fink, 1995, p. 66). The ANOVA test was employed to control for the class year, sex and race demographic characteristic differences among the SIRP and comparison group samples. Because of the nature of this study, the only main effect of interest is whether or not SIRP membership makes a difference in the scale results; other main effects (and their accompanying interaction effects) involving class year, sex, and race are not discussed in the analysis.

The SIRP survey also included fourteen single-item variables that were not incorporated in the scale measures listed above. They were not included because they a) represented independent measures of a distinct construct, such as GPA attainment, b) were incompatible to the constructs as determined through factor analysis testing, or c) were incompatible with the response scales of items used in the construct scales. Either a factorial ANOVA, an independent sample *t* test, or Chi Square statistical test was used with each of these variables to identify differences between the SIRP and comparison groupings. A significant difference between SIRP participants and comparison group students was observed on six of the fourteen variables that were not included in scale means, and these data are discussed in the next chapter.

Finally, similar data analysis was conducted on each of the twenty-four individual SIRP survey variables that were included in the construction of the seven scale measures. Either an ANOVA, an independent sample *t* test, or Chi Square statistical test was used to identify those variables where a statistically significant difference occurred between SIRP and comparison group students. The data derived through this testing are summarized in Table 11 and will be discussed in Chapter 4. Chapter 4 also includes a detailed presentation of findings on twelve specific questions that relate directly to the conceptual categories of student outcomes that informed the design of the SIRP living-learning community survey. These questions also relate directly to the seven scales that emerged through factor analysis. The specific questions and the data analysis techniques utilized to answer each are listed below.

Are SIRP Participants More Likely Than Non-Participants to Express Positive Academic Behaviors?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of Positive Academic Behaviors. The four variables on the SIRP survey that constituted the scale Positive Academic Behaviors are listed below and in Table 10: "How often have you gone to class well-prepared to answer questions or engage in discussion during this academic year?" (1=Never, 5=Very often); "How often have you asked questions in class or contributed to class discussions?" (1=Never, 5=Very Often); "How often have you discussed ideas from your courses or readings with students on your floor?" (1=Never, 5=Very often); "How often have you had discussions with friends about ideas that your courses stimulated?" (1=Never, 5=Very often).

Are SIRP Participants More Likely Than Non-Participants to Engage in Academic Work with Their Peers?

A factorial ANOVA test was used to determine if a statistically significant difference , at the $p < .05$ level, exists between SIRP students and the comparison group on the dependent variable of Academic Work with Peers. The three variables on the SIRP survey that constituted the scale Academic Work with Peers are reported below and in Table 10: "How often have you studied with students on your floor for a test or exam this academic year?" (1=Never, 5=Very often); "How often have you worked on homework with students on your floor this academic year?" (1=Never, 5=Very often); "This semester, how many times have you studied or worked on course work with other students who live in your residence hall?" (1=Never, 5=Eleven or more times).

Are SIRP Participants More Likely Than Non-Participants to Enjoy a Positive Learning Environment?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of Positive Learning Environment. The four variables on the SIRP survey that constituted the scale Positive Learning Environment are listed below and in Table 10: "I know at least one professor/instructor at UMass who is interested in my academic development" (1=Agree strongly, 4=Disagree strongly); "I have found other students on my floor with whom I can discuss intellectual ideas outside of class" (1=Agree strongly, 4=Disagree strongly); "At least one professor/instructor at UMass has inspired me to do better than I thought I could." (1=Agree strongly, 4=Disagree strongly); "I know at least one residence life staff member at UMass who is interested in my well-being." (1=Disagree strongly, 4=Agree strongly).

Do SIRP Participants Express Stronger Feelings of Commitment to UMass Than Non-Participants?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of Institutional Commitment. The three variables that constituted the scale Institutional Commitment are listed below and in Table 10. "I know where to go for help when I need information about UMass" (1=Agree strongly, 4=Disagree strongly); "I feel very good about my learning experience at UMass so far." (1=Agree strongly, 4=Disagree strongly). "I fit in at UMass."(1=Agree strongly, 4=Disagree strongly).

Are SIRP Participants More Likely Than Non-Participants to be Engaged in Diversity Issues?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of Diversity Engagement. The three questions on the SIRP survey that constituted the scale Diversity Engagement and that will assist with the study of student exposure to diversity issues are listed below and in Table 10. "How often have you socialized with students you met on your floor?" (1=Never, 5=Very often); "How often this academic year have you had serious conversations with students on your floor of a different race or ethnicity than your own?" (1=Never, 5= Very often); "How often this academic year have you had serious conversations with students on your floor whose beliefs, opinions or values are very different from your own?" (1=Never, 5=Very often).

Do SIRP Participants Express Greater Interpersonal Competence Than Non-Participants?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of Interpersonal Competence. The three questions on the SIRP survey that constituted the scale Interpersonal Competence are listed below and in Table 10. "I feel comfortable asking people of other races/ethnicities about their perspectives on racial issues." (1=Agree strongly, 4=Disagree strongly); "I learn the most about political/societal issues in discussions with my peers." (1=Agree strongly, 4=Disagree strongly); "I am able to challenge others' opinions when I feel they are misinformed" (1=Agree strongly, 4=Disagree strongly).

Do SIRP Participants Report Greater Satisfaction Than Non-Participants With Their Residence Hall Experience?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the control group on the dependent variable of Residential Experience. The four variables that constituted the scale Residential Experience and will assist with the study of satisfaction with residence hall experience are listed below and in Table 10. "How satisfied are you with your residence hall experience?" (1=Very satisfied, 4=Very dissatisfied); "How satisfied are you with the social activities offered in your residence hall?" (1=Very satisfied, 4=Very dissatisfied); "How satisfied are you with the educational activities offered in your residence hall?" (1=Very satisfied, 4=Very dissatisfied); "How satisfied are you with your overall experience on your floor?" (1=Very satisfied, 4=Very dissatisfied)

Do SIRP Participants Spend More Time Studying Than Non-Participants?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of numbers of hours spent studying. The one variable on the SIRP survey that asks respondents to identify the actual number of hours they studying reads, "On Average, how many hours per week do you spend studying or doing homework?" (Response scale=actual number of hours reported).

Do SIRP Participants Report Higher GPAs Than Non-Participants?

A factorial ANOVA test was used to determine if a statistically significant difference exists between SIRP and the comparison group on the dependent variable of GPA attainment. There is one variable on the SIRP survey that asks respondents to record their GPA (Response scale=actual GPA reported).

Are SIRP Participants More Likely Than Non-Participants to Participate in Student Activities?

A factor analysis test determined that the following four variables did not meet the alpha reliability standard and therefore did not constitute a scale. Each variable will be considered independently in the review of participation levels in student activities. "Are you involved in an extra-curricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.)?" (1=Yes, 2=No); "How difficult has it been for you to get involved in extracurricular activities at UMass?" (1=Very difficult, 4=Not at all difficult); "How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor?" (1=None, 4=Five or more); "Do you hold a leadership position (such as advisory board or house council) in your residence hall?" (1=Yes, 2=No). A crosstabulation using a Chi Square test for significance ($p < .05$) was used to compare SIRP participants and the comparison group on each of these dependent variables.

Are SIRP Participants More Likely Than Non-Participants to Meet Students on Their Floor with Whom They Have Things in Common?

A cross-tabulation using a Chi-square test for significance ($p < .05$) was used to determine if a significant difference exists between SIRP and the comparison group on the following dependent variable: "I have found students on my floor with whom I have things in common." (1=Agree Strongly, 4=Disagree Strongly).

Do SIRP Participants Express More Confidence Than Non-Participants That They Will Return to UMass Next Fall?

A crosstabulation using a Chi-square test for significance was used to determine if a significant difference exists between SIRP and the comparison group on the dependent variable; "How certain are you that you will return to UMass next Fall?" (1=I am completely certain I will return, 5=I am completely certain I will not return).

A one-way analysis of variance (ANOVA) procedure was used to derive mean scores for each of the seven scales, and a Tukey HSD post-hoc test was employed to determine the nature of the differences among the SIRP programs on each of the variables. The data derived from this testing will inform the discussion of findings among the SIRP programs and will assist with the review of the following broad research questions: a) What are the outcomes associated with participation in all living-learning communities at the university? and b) What are the differences in outcomes between students involved in living-learning community programs and students who reside in traditional residence halls that do not provide a living-learning program?

The final section of data analysis in this study involves a comparison of the findings of the SIRP study relative to the findings of the prior RAP/TAP study on

several outcomes. This discussion will assist with the analysis of the general research question: Do students in the more structured and academically oriented living-learning communities at the university derive different benefits than students involved in the less structured programs that are not organized around an academic theme?

In particular, RAP data will be compared with SIRP survey data to determine if there are substantial differences between these programs on the following questions: a) Are RAP participants more likely than SIRP participants to engage in academic work with their peers? b) Are RAP participants more likely than SIRP participants to express positive academic behaviors? c) Are RAP participants more likely than SIRP participants to enjoy a positive learning environment? d) Are RAP participants more likely than SIRP participant to be engaged in diversity issues?, and d) Are RAP participants more likely than SIRP participants to participate in social activities? Comparisons will be discussed when identical survey items were utilized for the two studies.

CHAPTER 4

FINDINGS

This chapter reports findings on the outcomes associated with participation in living-learning communities at the University of Massachusetts, Amherst. The report on findings includes a detailed review of SIRP survey data related to the twelve research questions designed to clarify the differences in outcomes between students involved in a SIRP program and students residing in a traditional residence hall. A comparison of data among the ten SIRP programs also is included in this section. The chapter concludes with a comparison of SIRP and RAP survey data and a summary of substantial differences between these programs.

Finding

SIRP Students and Comparison Group

As previously noted, one area of interest in this study concerns the comparison of scale mean scores for SIRP students and non-participants. As shown in Table 10, a statistically significant difference ($F(1,482) = 9.064$, $p = .035$) was found only between the SIRP and comparison group on the Diversity Engagement scale. SIRP participants had higher mean scores (3.46 versus 2.90) on this scale; other observed differences were minimal.

A second area of interest in this study involves twelve research questions designed to clarify the differences in outcomes between SIRP participants and

comparison group students. A detailed summary of findings related to these questions is found below.

Are SIRP participants more likely than non-participants to express positive academic behaviors? A 5 (class year) x 2 (sex) x 2 (race) between subjects factorial ANOVA test was calculated comparing the scale mean scores of SIRP and comparison group students on the dependent variable Positive Academic Behaviors, and results are reported in Table 11. These data suggest that SIRP students were not more likely than non-participants to express positive academic behaviors ($F(1,479) = 1.480$, $p = .224$), and no interaction effects were observed.

A crosstabulation of responses and a Chi Square significance test was conducted to determine if a statistically significant difference emerged between the two groups on each of the four survey items that constituted this scale. These tests clarified that there were no significant differences between SIRP participant and non-participants on two variables including, how often during this academic year have you (a) asked questions in class or contributed to class discussions, and (b) had discussions with friends about ideas your courses stimulated. As previously discussed, the SIRP programs are not organized on an academic theme, and they do not involve a shared academic experience for students. Therefore, it is not unexpected that SIRP participants would have a similar experience to comparison group students on the scale Positive Academic Behaviors, and on the individual variables that comprise this scale.

A significant difference between SIRP participants and the comparison group was observed on the variable, "how often have you worked on a paper or project where you had to integrate ideas from various sources?" Table 12 summarizes data suggesting

that SIRP participants (27.6%) were more likely than comparison group students (21.2%) to respond that they "Very often" have worked on a paper or project where they had to integrate ideas from various sources. The data presented in Table 13 suggests that female students of color in SIRPs (29.6%) were much more likely than their counterparts in the comparison group (3.2%) to indicate that they "Very often" have expressed this same positive academic behavior. It is not clear in this study why there is such a large gap between the score of female students of color who participated in SIRPs and their counterparts in the comparison group on this particular variable. It is possible that the ethnic and social identity oriented SIRPs draw a disproportionately large percentage of their female students of color from academic disciplines that employ modes of inquiry that promote the integration of ideas from various sources. The female students of color in the comparison group might exhibit different behavior simply because they participate in a broader range of majors than their counterparts in SIRPs. Unfortunately, the SIRP survey did not ask participants to identify their academic major. Therefore, it is not possible to test this hypothesis with the current data. Further research on UMass living-learning community programs should consider incorporating this demographic information if the variable being discussed is included in that study.

A significant difference also was found on the variable, "how often have you gone to class well-prepared to answer questions or engage in discussion?" As demonstrated in Table 14, SIRP participants (24.6%) were more likely than non-participants (15.1%) to indicate they "Very often" went to class well prepared. These data appear to support Pascarella and Terenzini's (1991) argument that student participants in living-learning programs "show significantly larger gains in intellectual

orientation than do students in traditional curricular programs" (p. 245). However, as previously discussed, most studies on outcomes related to academic achievement and gains with intellectual orientation, such as Bennett and Hunter's (1985) and Newcomb and his colleagues' (1971) research involved academically-based programs that provided more structure and services to participants than the SIRP programs.

It is not clear in this study why SIRP participants were more likely than comparison group students to express these academically oriented behaviors. Pascarella and Terenzini (1991) argued that the effects of some living-learning experiences may be *in*direct rather than direct. That is, the effects may be mediated by interpersonal contacts with peers and faculty and thus derive more from the socialization processes they tend to facilitate than from any of the structural characteristics (for example, size, rules and regulations governing activities, structured activities) of the program itself (p. 245). This would suggest that even though SIRP programs do not include an academic component, participants still derive some academically and intellectually oriented benefits that possibly result from the increased levels of involvement and interaction with their peers that is found in these programs.

Are SIRP participants more likely than non-participants to engage in academic work with their peers? A factorial ANOVA test was used to derive a scale mean score for SIRP participants and comparison group students on this measure. As reported in Table 15, these data suggest that living-learning community participants are not more likely than non-participants to engage in academic work with their peers; the main effect for SIRP participation was not significant ($F(1,482) = 2.157$, $p = .143$). However, as shown in Table 15, an interaction effect with SIRP participation, Race and Class-year

was observed. An attempt was made to conduct a Tukey HSD post hoc test to determine where differences resided between groups on this variable. Tukey HSD could be conducted due to cell size limits within the survey sample.

Newton and Rudestam (1999) described an interaction effect as "the joint effect of two or more independent variables on a dependent variable; however, two variables can both influence a dependent variable without an interaction being present" (p. 208). Table 16 provides a breakdown of the scale Academic Work with Peers mean scores by total sample population (SIRP or comparison group) by race and by class-year. These data suggest that students of color in the sophomore, junior and 5th year population who participated in a SIRP had higher mean scores than their counterparts in the comparison group. For example, junior year students of color in a SIRP had a significantly higher mean score (2.53) than their counterparts in the comparison group (1.67) on this scale. These data suggest that one of the effects of SIRP participation for junior-year students of color in this study is a significant increase with the three behaviors mentioned below that comprise the scale Academic Work with Peers.

The Academic Work with Peers scale included three variables: (a) the frequency of studying with other students for their floor for a test of exam, (b) the frequency of working on homework with other students in their residence hall, and (c) the frequency of students studying or working on homework with other students in their residence hall. A crosstabulation of responses and Chi Square statistical test determined that there was no statistically significant difference between SIRP and comparison group students on any of these variables.

The finding of few significant differences between SIRP participants and comparison group students on the scale Academic Work with Peers, and on each of the three individual variables that comprise this scale is not surprising. As discussed in Chapter One, SIRPs are organized to support a variety of cultural, personal identity, educational interests, or lifestyle preferences. Unlike the RAP programs and the majority of living-learning communities discussed in the literature, SIRPs do not require participants to enroll in classes together or meet with faculty in their residence hall.

Unlike many living-learning communities that are restricted to students from a specific class-year and/or academic discipline, SIRPs are open to all undergraduate students. It is possible that the great diversity found among students in the SIRPs may actually inhibit those behaviors relating to Academic Work with Peers that are explored in this study, because student from various class years and in different fields of study do not necessarily have a common academic experience and interests that relate to the SIRP program. At the very least it appears that the SIRP programs are not structured to serve as a catalyst for students to participate in these specific behaviors. In this regard SIRPs appear to have more in common with traditional residence halls, than with many other living-learning community programs discussed in the literature.

Are SIRP participants more likely than non-participants to enjoy a positive learning environment? A factorial ANOVA test was conducted to compare scale mean scores for SIRP participants and comparison group students on this measure. The data derived through this test are reported in Table 17, and suggest that living-learning community participants do not enjoy a more positive learning environment than non-

participants in this study ($F(1,481) = 1.109$, $p = .293$), and no interaction effects were observed on this scale.

The scale Positive Learning Environment consisted of four variables and a crosstabulation of responses and Chi Square statistical test was conducted to study differences between the two survey populations on each of these items in the survey. The findings suggested that living-learning community members were not more likely than the comparison group to (a) know at least one professor/instructor who was interested in their development, (b) know at least one residence life staff member who was interested in their well-being, or (c) know at least one professor/instructor who had inspired them to do better than they thought they could. These findings are not unexpected as SIRPs are not structured to facilitate student-with-faculty contact, nor are Residence Life staff members expected to interact with their residents on a more frequent basis than those staff members in traditional residence halls. With regard to these two variables, the SIRP programs have more in common with the traditional residence halls on campus than with the RAP programs.

A statistically significant difference did emerge between the SIRP participants and comparison group with responses to the variable, "I have found other students on my floor with whom I can discuss intellectual ideas outside of class." As shown in Table 18, SIRP participants (47.0%) were much more likely than comparison group students (35.4%) to "Agree strongly" with this statement. This testing also found that White male SIRP participants were much more likely (56.0%) than their counterparts in the comparison group (35.6%) to "Agree strongly" that they had found other students on their floor with whom they "can discuss intellectual ideas outside of class." Table 19

provides additional information on these test results. It is not clear why this finding of difference was observed between White males in a SIRP and those in the comparison group on this variable. However, it is interesting to note that a significant difference also was observed between White males in a SIRP and in the comparison group on the variable, "How often this year have you had serious conversations with students of a different race or ethnicity than your own?" Perhaps White males in a SIRP viewed serious conversations with their peers as "intellectual" in nature, or perhaps they simply were involved in more conversations of many types with their floor-mates than were their counterparts in the comparison group. Moreover, it is possible that this subset of SIRP students were heavily involved in the living-learning community programs, which may have contributed to a variety of positive outcomes. As previously discussed, the purpose of the SIRP program is to create living-learning communities that support students' academic experiences, develop their leadership skills, and promote dialogue among students and staff. Staff and students within the community organize social and educational programs for community members. These programs address a variety of issues related to diversity, civic responsibility, leadership development and academic success. Because the majority of students self-select to join the program, and because attendance at these activities is high, it was expected that SIRP participants would enjoy increased levels of interaction with their peers on a variety topics including those with an intellectual orientation.

Bennett and Hunter (1985) and Magnarella (1975) also found that participants in living-learning programs were more likely than students in a traditional residence hall to enjoy a positive learning environment. Bennett and Hunter (1985) found that the Will

Program "provided students with the opportunity to take classroom concepts and use them in a non-academic setting" (p. 11). As well, Magnarella (1975) reported that "ninety-one percent of the total LLC student sample said the LLC provided an atmosphere conducive to holding serious discussions" (p. 7).

Do SIRP participants express stronger feelings of commitment to UMass than non-participants? A factorial ANOVA test was used to compare scale mean scores for SIRP participants and comparison group students on this measure, and the results are reported in Table 20. This test suggested that living-learning community participants do not express stronger feelings of commitment to the University than comparison group students ($F(1, 482) = .779$, $p = .378$), and no interaction effects were observed.

The scale Institutional Commitment involved three variables, including (a) I know where to go for information about UMass, (b) I feel good about my learning experiences at UMass, and (c) I fit in at UMass. A crosstabulation of responses and Chi Square statistical test was conducted to determine differences between the SIRP and comparison group students on each of these variables. No significant differences were observed, between the two groups in general, but as demonstrated in Table 21, White females in the comparison group (60.0%) were much more likely than their SIRP counterparts (45.5%) to "Agree strongly" with the statement, "I fit in at UMass." Although their research did not specifically address the experiences of White females, this finding appears to contradict Arminio's (1994), Henry and Schein's (1998) and Meyer and Schuh's (2001) research, which suggested that living-learning community participants, in general, experience increased levels of social and academic integration through their participation in these programs, and as a result they are more successful

and satisfied with their college experiences. This appears not to be the case with White female SIRP students when compared to their counterparts in the comparison group in this study.

The Chi Square statistical tests conducted on each survey variable were examined to identify similar differences between comparison group students and SIRP participants. A significant difference also was found between SIRP and comparison group students on the individual variable, "How certain are you that you will return to UMass next Fall?" Comparison group student scores were again significantly different from and more favorable than SIRP participants on this variable. However, the difference between the two groups was not specific to only White females. More discussion on this variable is provided later in Chapter Four. These two findings are troubling as they appear to contradict basic assumptions on outcomes related to living-learning community participation. Although it remains unclear what factors contributed to the finding of a negative outcome for SIRP students on the variable "I fit at UMass" one factor, in particular, merits further discussion. In the 2001/2002 academic year, UMass Amherst experienced an unexpectedly strong yield on first-year student admission acceptances. This resulted in a significant over-subscription problem in the residence halls that extended throughout the full year. As a result, all available permanent bed spaces, and over 200 temporary spaces were assigned to student use. Housing Services staff members who were responsible for the annual room assignment process reported that a substantial number of students who were assigned to a SIRP during that year had not expressed the preference to participate in those programs during the room selection/request process. It is possible that students who accepted an

assignment to a SIRP program that year only did so based on the perception that the SIRP program was the best option available to them at the time. Students who defaulted into the program versus those preferring to join may not have "fit" or enjoyed the program because it turned out to be incompatible with the lifestyle. Unfortunately, the SIRP survey did not include a questions relating to preference with housing assignment and the SIRP program. Therefore, it is not possible to test this hypothesis with the data that is currently available. In further studies, this variable should be included.

Finally, a crosstabulation of responses and Chi Square statistical test was conducted to determine if there was a significant difference between first-year SIRP student responses and those of SIRP participants from each of the other class years on this variable. It was assumed that this test might reveal that first-year SIRP participants would be more likely to indicate that they did not "fit in at UMass." However, no significant differences were found between these populations on this variable.

Are SIRP participants more likely than non-participants to be engaged in diversity issues? The data do suggest that living-learning community participants are more likely to be engaged in diversity issues than comparison group students. As shown in Table 22, a factorial ANOVA was conducted and found a main effect with SIRP participation ($F(1,482) = 9.064$, $p = .003$). SIRP participants were found to have significantly higher mean scores (3.46) than non-participants (2.90) on the diversity engagement scale. No interaction effects were observed on this scale.

The purpose of the SIRP programs, as described by the UMass Residence Life department, is to create intentional identity and lifestyle based living-learning communities that support students' academic experiences, develop their leadership skills, and promote opportunities for dialogue and understanding of issues of difference and social justice. Students and staff in these programs organize educational and social programs based on the community theme and the interests of the participants. Six of the 10 SIRP programs involved in this study are based on a cultural theme, and they include the (a) Asian/Asian-American, (b) Harambee, (c) Native American, (d) International House, (e) Nuance, and (f) 2 in 20 Program. Table 6 reported survey response totals and highlighted that 205 of the 305 total survey respondents in this study participated in one of these 6 programs. Therefore, it was expected that a difference would be observed between SIRP participants and comparison group students on the scale Diversity Engagement, and on the individual variables that comprise this scale if these SIRPs were meeting their stated goals.

A crosstabulation of responses and Chi Square statistical test was conducted to determine differences between SIRP participants and comparison group students on each of the three variables that comprised the diversity engagement scale. These variables include how often during this academic year students (a) socialized with students they met on their floor, (b) had conversations with students of a different race or ethnicity than their own, and (c) had conversations with students with different beliefs, opinions and values than their own. This testing found a significant difference between SIRP participants and the comparison group on how often students had "serious conversations with students on their floor of a different race or ethnicity than

your own." Table 23 shows that SIRP participants (24.0%) were twice as likely than comparison group students (12.5%) to indicate that they "Very often" had such conversations with other students. SIRP students (15.1%) were less likely than those in the comparison group (22.1%) to respond they "Never" participated in these conversations.

As shown in Table 24, 28.2% of female students of color in a SIRP, versus 16.1% of their comparison group counterparts indicated that they "Very often" had such conversations. Additional data on differences found between White male students in a SIRP and those in the comparison group is included in Table 25. For example, White male SIRP students (28.5%) were much more likely than their counterparts in the comparison group (13.6%) to indicate that they "Very often" had serious conversations with student of a different race or ethnicity than their own.

These findings of significant difference are not surprising, as these students self-selected into programs whose theme and core activities promote dialogue and understanding of issues of difference and social justice. It was expected that those SIRP participants who were active in residence hall programs and with their floor-mates would be more likely to report higher levels of interaction with people who they perceived as different from themselves. It is interesting to note that this study also revealed that female students of color in a SIRP program were more likely than their counterparts in the comparison group to participate in formal residence hall programs, and this may have had an effect on their behavior related to diversity issues. More information on the findings related to student participation in SIRP programs appears later in this chapter.

A significant difference also was found between the SIRP and comparison group samples on the number of times during the academic year that students had serious conversations with students on their floor whose beliefs, opinions or values are different from their own. As shown in Table 25, SIRP participants (20.9%) were much more likely than non-participants (12.9%) to respond "Very often" on this variable. SIRP participants (14.0%) also were less likely than comparison group student (20.8%) to indicate that they "Never" had serious conversations with students whose beliefs, opinions, or values were different from their own. The data also suggest that male students of color within the comparison group were more likely to "Never" or "Rarely" be involved in these conversations (29.2% and 35.4% respectively) than their counterparts within a SIRP (25.4% and 13.4% respectively). This subset of SIRP students (11.9%) were much more likely to be "Very often" involved with this type of behavior than non-participants (4.2%). Table 25 provides additional information on SIRP and comparison group responses on this variable. As previously discussed, the majority of the SIRP participants who responded to the living-learning program survey were involved in one of the six cultural theme or social identity communities. Students self-select into these programs and the living-learning environment provides them an enhanced opportunity for informal interaction and structured discussions with peers on a variety of topics. It appears that a diverse group of students, including both female and male students of color, and White male students who are interested in the exploration of issues related to race/ethnicity, culture, and diversity of thought all benefit from their participation in a SIRP program.

Additional testing found a significant difference between SIRP participants and non-participants on the variable, "How often during this academic year have you socialized with students you met on your floor?" Table 28 summarizes data that suggests SIRP students (2.7%) are less likely than comparison group students (7.2%) to report they "Never" socialized with students on their floor. SIRP students (9.6%) also are less likely than the comparison group members (15.1%) to indicate that they "Rarely" socialize with others from their floor. Further analysis revealed that junior-year comparison group students (28.6%) were much less likely than SIRP participants (35.3%) to "Sometimes" socialize with students they met on their floor. Junior year comparison group students (28.6%) also were less likely than their SIRP counterparts (38.2%) to report they "Very often" socialized with their floor-mates. Table 29 reports on these finding for junior year students.

It should be noted that UMass Amherst students are provided the option to either remain in University housing, or to move off-campus at the conclusion of their sophomore year. Moreover, the UMass room assignment program rewards students with seniority in the system by prioritizing their housing preference, and placing them before new students. Therefore, it is likely that all junior-year or senior-year students assigned to a SIRP had expressed their preference to participate in the program. It was expected that any of these upper-division students who elected a to live in a SIRP would meet many students with whom they had things in common and would be more likely to socialize with students they met on their floor. It also was assumed that the social and education programs offered in the SIRP would encourage more social interaction between SIRP students.

It is interesting to note that significant differences also were found between Junior year SIRP participants and their counterparts in the comparison group on the variables (a) I have found other students on my floor with whom I have things in common, and (b) I am involved in an extracurricular activity. In both cases SIRP participants had the more favorable score on the variable. These findings suggest that junior-year SIRP participants are more involved than their counterparts in the comparison group on several measures of social integration. These findings are not surprising when considering that these students have chosen to live on-campus and to participate in a structured, special theme program versus moving off-campus to enjoy more autonomy and privacy. It is possible that the junior-year SIRP participants are drawn to these programs because of the student culture and activities found in the living-learning communities. However, it also is possible that these students would still be more involved than most students in these types of behaviors even if they did not reside in a SIRP program. Clearly, further research is needed on this topic to determine if these findings are consistent over time, and to consider the effects of self-selection on the outcomes reported.

The literature review in this study did not uncover other research on living-learning community outcomes on specific behaviors related to student involvement with issues of diversity. This finding may suggest questions regarding outcome measures that should be considered in future research on this topic. Nevertheless, it appears that the literature most closely approximating the diversity engagement theme and the individual measures used in this study involves research on the character and quality of student interpersonal relations. Pascarella and Terenzini (1991) wrote that few studies

exist on the effects of residence on the interpersonal relations of students, and they argued that "where one lives during the college years is also probably not related to changes in the character of students' interpersonal relations" (p. 246). They cited the work of Newcomb and his colleagues (1971), who found that "students in a living-learning center declined somewhat on measures of sociability and social extroversion while students in a conventional residence hall increased slightly" (p. 247).

The SIRP study data appears to contradict Newcomb and his colleagues' (1971) findings and raises several important points for discussion related to student development theory. Chickering (1969) and Chickering and Reisser (1993) have discussed the significance of "Developing Mature Interpersonal Relationships" in the development of traditional-age college students. They suggested that experiences that assist students define 'who I am', 'who I am not' can help solidify a sense of self...Personal stability and integration are the result" (p. 509). When a student achieves a stable and realistic self-image, new challenges become less threatening, and the student is better prepared to respond to new ideas, or conflicting values and beliefs. As a student's identity is shaped an increased ability to interact with others emerges, and a student develops an "increased tolerance and respect for those of different backgrounds, habits, values, and appearance, and a shift in the quality of relationships with intimates and close friends" (Chickering, 1969, p. 94). In this regard, "tolerance is understood to be not merely the ability to withstand the unpleasant but rather greater openness and acceptance of diversity" (Pascarella & Terenzini, 1991, p. 22).

Chickering and Reisser (1993) argued that the growing cultural diversity in recent years makes the development of tolerance particularly important and the

development of the capacity for intimacy even more complex than when Chickering (1969) first formulated his theory. This literature suggests that a critical function of the college experience is to promote acceptance of individual differences and an appreciation for cultural diversity. This study found that SIRP participants were more likely than comparison group students to (a) have serious conversations with students on their floor of a different race or ethnicity than their own, and (b) have serious conversations with student on their floor whose beliefs, opinions or values were different from their own. These findings suggest that the SIRP living-learning community programs may represent an outstanding model for engaging students in these aspects of learning.

Do SIRP participants express greater interpersonal competence than non-participants? This study suggests that SIRP participants do not express greater interpersonal competence than the comparison group students. A factorial ANOVA test was conducted comparing the mean scale scores for SIRP students and non-participants, and no significant difference was found ($F(1,482) = 2.398$, $p = .122$). As demonstrated in Table 30, no significant interaction effects were observed on this scale.

A cross-tabulation of responses and Chi Square statistical test was conducted on each of the three variables that constituted this scale. They included a) I feel comfortable asking people of other races/ethnicities about their perspectives on racial issues, b) I am able to challenge others' opinions when I feel they are misinformed, and c) I learn the most about political/societal issues in discussions with my peers. No significant differences were observed between the SIRP and comparison group students on these individual variables.

It should be noted that the scale Interpersonal Competence and the three variables that comprise this scale also relate to the character and quality of student interpersonal relations. Although the finding of no significant differences between SIRP participants and comparison group students on these variables may appear to contradict the earlier discussion of findings related to diversity engagement, there are subtle differences between these measures that merit discussion. The diversity engagement measures describe patterns of interaction between students, while the interpersonal competence measures study the level of comfort or confidence students feel when (a) asking people of another race/ethnicity about their perspectives on racial issues, and (b) challenging others' opinions when they feel they are misinformed. Clearly, these scales measure different aspects of student interpersonal relations, and it is not contradictory to suggest that SIRP participants may enjoy higher levels of interaction with peers whom they perceive as different from themselves, however they do not express higher levels of comfort or confidence than the comparison group.

Do SIRP participants report greater satisfaction with their residence hall experience than non-participants? A factorial ANOVA test determined that there was no significant difference between SIRP participants and comparison group students regarding levels of satisfaction with their residence hall experience ($F(1,474) = .026$, $p = .871$) and the results of this test are reported in Table 31. However, a significant interaction effect with SIRP participation, sex and class year materialized. An attempt was made to conduct a Tukey HSD post hoc test to determine where significant differences were found among groups on the scale Residential Experience variable. Unfortunately, there again were limits present within survey sample cell counts that

prohibited the use of this testing. Table 32 highlights that both female and male, first-year SIRP participants recorded higher mean scores (3.10 and 3.04 respectively) than their counter parts in the comparison group (2.91 and 2.78 respectively). These data suggest that the effect of SIRP participation for both male and female first-year students increased mean scores on the scale Residential Experience, which implies that these student were more satisfied with their residential experience than their counterparts in the comparison group.

A cross-tabulation of response and Chi Square statistical test was conducted on the four variables that constituted the residential experience scale to determine if significant differences existed between the two populations at the individual variable level. The data derived through this test suggested that there was no significant difference between the groups on the variables, a) how satisfied you with your residence hall experience, b) how satisfied are you with social activities in your residence hall, c) how satisfied are you with educational activities in your residence hall, and (d) how satisfied are you with your overall experience living on your floor.

Do SIRP participants spend more time studying that non-participants? An independent samples *t* test was conducted to derive a mean score and analyze if there was a significant difference between SIRP participants and comparison group students on the variable of time spent studying or doing homework each week. The difference between the two groups did not rise to a statistically significant level ($t(583) = -1.252$, $p = .211$). The mean score of the SIRP group ($m = 14.60$, $sd = 10.72$) was not significantly higher than the mean of the comparison group ($m = 13.53$, $sd = 10.05$).

Do SIRP participants report higher GPAs than non-participants? At first glance the SIRP survey data appeared to suggest that living-learning community students achieved a higher Grade Point Average (GPA) than non-participants in this study. An independent samples *t* test was used to derive a mean GPA score by SIRP and comparison group and to determine if any difference between the two groups reached a statistically significant level. A significant difference did emerge with SIRP participants achieving a higher GPA ($t(527) = -2.317$, $p = .021$). The mean score of the SIRP group ($m = 3.17$, $sd = 0.53$) was significantly higher than the mean of the comparison group ($m = 3.06$, $sd = 53.63$).

However, when a 5 x 2 x2 factorial ANOVA test was conducted to control for the potential effects of class year, race and sex, no significant differences were found between the two groups ($F(1,489) = 1.957$, $p = .163$). As shown in Table 33, no interaction effects were significant on this variable. These findings appear to contradict research suggesting students who live in living-learning settings experience greater levels of academic achievement, as indicated by earned GPA, than students in conventional residence halls (Blimling & Hample, 1979; Blimling & Paulsen, 1979; Decoster, 1968; Edwards and McKelfresh, 2002, Kanoy & Bruhn, 1996). In their study, Blimling and Hample (1979) found that a "study floor" living-learning community had a statistically significant positive impact on grades, even after controlling for several variables associated with academic performance. These researchers conceded that although the study floor environment seemed to improve academic performance, the exact causal agents were not identified in their research.

Unlike Blimling and Hample's (1979) "study floors" or Kanoy and Bruhn (1996) "first-year living-learning program" which were designed specifically to promote academic success, the SIRP programs offer no formal academic support structures or services. Therefore, the finding of no significant difference between SIRP participants and comparison group students on GPA achievement, when SIRP programs are non-academic in nature is not surprising. However, these findings emphasize the need for more research on the full range of living-learning communities to determine if these findings persist over time. Additional research also is needed to study if the positive outcomes related to academic performance that are derived in academically oriented living-learning communities result from the programs themselves or from other factors related to student motivation and self-determination.

Are SIRP participants more likely to participate in student activities than non-participants? A factor analysis determined that four variables did not meet the alpha reliability standard and therefore did not constitute an internally consistent scale. Each of the following variables was considered independently in the review of participation levels in student activities: "Are you involved in an extra-curricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.) on a regular basis?" (b) "How difficult has it been for you to get involved in extracurricular activities here at UMass?" (c) "Do you hold a leadership position (such as holding an office or serving on a committee) in your residence hall?" and (d) "How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor?"

The SIRP survey was designed to study these variables based on the understanding that a significant aspect of the impact of college "is determined by the extent and content of one's interactions with major agents of socialization on campus, namely faculty members and student peers" (Pascarella & Terenzini, 1991, p. 620). The researchers also recognized that participation in extracurricular activities is commonly regarded as a formal manifestation of student involvement, primarily with their peers, during college. The SIRP living-learning programs are structured to promote student participation in community programs with their peers and to encourage involvement in leadership opportunities, as such involvement leads to significant gains with (a) academic achievement and persistence, (b) academic and social self-concepts, (c) general maturity and personal development, (d) intellectual orientation, (e) moral development, and (f) aesthetic, cultural, and intellectual interests (Pascarella & Terenzini, 1991). Therefore, it was expected that significant differences would be found between SIRP participants and the comparison group students on these individual variables.

A cross-tabulation of responses and Chi Square statistical test found a significant difference between SIRP participants and comparison group members on the variable concerning involvement in extracurricular activities (e.g., choral group, intramural athletics, student cultural organizations, etc.). Table 34 illustrates that SIRP students were more likely than those in the comparison group to report involvement in extracurricular activities (62.9% vs. 53.6%). Additional testing determined that female students of color involved in a SIRP (70.8%) were much more likely than their

counterparts in the comparison group (44.8%) to indicate "Yes" they were involved in an extracurricular activity. Results from this test are reported in Table 35 in this study.

Table 36 demonstrates that junior-year SIRP participants (67.7%) were much more likely than junior-year comparison group students (47.5%) to report involvement in an extracurricular activity. These findings are not surprising considering the literature on extracurricular involvement which suggests that students with high participation in such activities tend to enter college with higher educational aspirations. It is hypothesized that these students constitute a peer culture within an institution, a culture whose norms support and encourage the education pursuits and aspirations of its members (Pascarella & Terenzini, 1991).

It is possible that SIRP programs provide students of all types with a special living-learning environment that encourages everyone to become more involved in campus life. However, it also is possible that students who have higher educational aspirations and who become involved in extracurricular activities, are more likely to self-select to join SIRP programs. Because students self-select into these living-learning programs versus being randomly assigned, it is not clear whether this finding of difference between SIRP participants and comparison group students is attributable to participation in the program or differences in levels of motivation and self-determination. Further research is needed on the effects of student motivation and SIRP participation on involvement with extracurricular activities.

Table 37 indicates that comparison group students (32.3%) were much more likely than SIRP participants (22.1%) to respond that it was "Somewhat difficult" to get involved in extra-curricular activities. As shown in Table 38, similar testing also

revealed that junior year comparison group students (42.4%) were much more likely than their counterparts in a SIRP (20.0%) to indicate that it was "Somewhat difficult" to get involved in extracurricular activities. Table 39 demonstrates that White males in the comparison group (28.7%) were more likely than their counterparts in a SIRP (10.2%) to indicate that it was "Somewhat difficult" to get involved in extracurricular activities. It was expected that some SIRP students would perceive their participation in the SIRP as an extracurricular activity, particularly if they were actively involved in the programs and activities that promoted student interaction and student leadership development. Because these students self-selected to participate in the SIRP by simply noting their preference on a housing application, they would be less likely than comparison group students to perceive that it was difficult to become involved in extracurricular activities. As discussed above, this study also found that junior year SIRP students (67.7%) were more likely than their counterparts in the comparison group (47.5%) to indicate extracurricular involvement. Therefore, it should not be surprising that students from this same grouping expressed less difficulty with getting involved in these activities. It is not clear in this study if findings related to student involvement in extracurricular activities and perceptions on the ease of becoming involved are derived through participation in the living-learning communities themselves, or if the outcomes are derived from students with higher educational aspirations and tendencies for involvement self-selecting the SIRP programs. Further research on this topic should entertain these questions. The data also suggested that SIRP participants were more likely to hold a leadership position (such as an advisory board or house council position) in their residence hall than comparison group students. Table 40 shows that, in

general, SIRP participants (16.5%) were more likely than non-participants (9.0%) to hold a leadership position in their residence hall. Similar testing also revealed a significant difference between first-year SIRP participants and first-year comparison group students on this variable. Table 41 demonstrates the first-year SIRP students (15.9%) were much more likely than their counterparts in the comparison group (2.2%) to report holding a leadership position.

Several senior residence life staff members suggested that Resident Assistants (RAs), as well as other live-in staff in SIRP programs, seek out first-year students to encourage their involvement with activities in the hall. These RAs often will recruit first-year students to leadership positions within the hall based on their leadership potential, or the perception that they would benefit from this type of involvement. It is believed that the encouragement provided by the RAs, in combination with the increased levels of community interest and involvement expressed by upper-division students in the SIRP, may prompt more first-year students to assume leadership roles in these programs.

The data presented in Table 42 suggest that female students of color who participated in a SIRP program (22.4%) were much more likely than their counterparts in the comparison group (3.3%) to indicate that they held a leadership position. Table 42 also shows that male students of color who participated in a SIRP (19.7%) were much more likely than their comparison group counterparts (0.0%) to indicate that they held a leadership position in their residence hall. In their review of the data, senior-level residence life staff members suggested that it was likely these findings on the involvement of students of color in leadership in the SIRPs resulted from student self-

selection to living-learning communities that involve a social identity theme. These staff suggested that SIRPs such as Harambee and the Nuance program serve many students' affiliation needs, particularly when they arrive on campus. Staff also speculated that as students of color come to feel established and comfortable in the SIRP they are more likely to become involved in community activities. As they participate in these activities and become more invested in the community and with their peers, they are more likely to participate in leadership roles. This conception of why students of color in a SIRP were more likely than their counterparts in the comparison group to hold a leadership position, is closely aligned with Schroeder's (1993) discussion of the impact of learning communities. He wrote, "most of the impact can be explained by the *interaction* effect associated with four essential principles. These principles have been referred to as the four *I's*: involvement, investment, influence, and identity" (p. 174).

This study's review of the literature on living-learning community outcomes uncovered little research on (a) student participation levels in formal extra-curricular activities, (b) student perceptions on the difficulty of becoming involved in such activities, and (c) student participation levels in formal leadership positions within their living-learning community. This is unfortunate, since Pascarella and Terenzini (1991) found that "extracurricular involvement has a positive impact on educational attainment"...As a group, students who frequently participate in extracurricular activities tend to enter with relatively high educational aspirations. Consequently, they may constitute a peer culture within the institution, a culture whose group norms tend to accentuate the educational aspirations of participating members (p. 624).

In further research on living-learning community outcomes, these variables should be included. A significant difference also was observed when comparing the responses of SIRP students and the comparison group on the variable, "How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor?" As summarized in Table 43 comparison group students (33.2%) were much more likely than SIRP students (14.6%) to indicate they attended "None." SIRP participants (31.3%) were much more likely than non-participants (14.0%) to indicate they attended "Three or four" such programs or events, and "Five or more" (16.0%) versus (6.3%) respectively. Table 44 shows that female students of color in a SIRP program (43.7%) were much more likely than female, students of color in the comparison group (6.7%) to attend "Three or four" programs in their residence hall and "Four or more" (14.1% versus 3.3%). This pattern continued with male students of color in SIRPs (39.7%) who were more likely than their counterparts in the comparison group (12.5%) to attend "Three or four" programs, and "Five or more" (23.8% versus 4.2%). Table 44 also shows that these same SIRP students (6.3%) were much less likely than male students of color in the comparison group (39.6%) to attend no programs sponsored by their residence hall or floor. This finding might indicate that students of color in a SIRPs program identify more with the goals and activities that are part of their living environment than their counterparts in a traditional residence hall. This probably results from student selection to SIRP programs that feature social and education activities that are designed to support the special theme of each living-learning community.

Other significant differences included first-year comparison group students (34.0%) being more likely than first-year SIRP participants (14.9%) to indicate they had attended no programs. These same comparison group students (16.0%) were much less likely than their counterparts in a SIRP program (31.0%) to indicate they had attended "Three or four" programs in their residence hall, or five or more programs (2.0% versus 18.4%). Table 45 provides additional information on these data. As discussed above, this finding might indicate that this group of SIRP participants felt a stronger sense of affiliation than their counterparts in the comparison group with the activities and their peers in their residence hall. It also is possible that residence life staff member efforts to assist new SIRP students in their transition to college by encouraging them to participate in these programs are effective. First-year students may attend these programs for a variety of reasons, including interest in the topic, a desire to interact with peers, or the desire to please others in the community.

Unlike the SIRP survey, which studies behaviors that relate to the degree of student involvement in residence hall activities, most of the related research on living-learning community outcomes involves student attitudes related to satisfaction with activities. However, the literature review in this study did uncover two studies that incorporated at least one variable that was intended to measure the degree of student involvement in a manner that was similar SIRP survey. The SIRP data appears to support Henry and Schein's (1998) finding that living-learning participants were more involved than comparison group students. In that study living-learning students had more favorable scores than the comparison group on the variable "I am very involved in social activities" (p. 12). On the other hand, the SIRP survey data appears to contradict

Clarke and his colleagues' (1988) research which found that living-learning community participants "reported less time spent in organized residence hall activities" (p. 9). In this study students were asked to provide estimates of the hours they spent per week on various community, social, academic, and vocational activities that were adapted from the Pace (1984) Survey of the quality of student effort.

Few studies on living-learning communities employ measures of student involvement with formal activities in their residence hall. Moreover, each of the studies that do incorporate this theme use different measures of student involvement. This is problematic as Astin (1985) argued that "students learn by becoming involved" (p. 133), and his research found that involvement requires significant investment of psychological and physical energy in tasks, people, and activities related to academic and social aspects of college life. Pascarella and Terenzini (1991) found that extracurricular involvement appears to have a positive impact on educational persistence and attainment, and on the development of a positive social self-concept. This suggests that further studies on living-learning community outcomes should incorporate measures on the degree of student involvement in formal extracurricular activities, in leadership positions, and with program attendance on campus and in their residence hall, as well as student satisfaction with these matters.

Are SIRP participants more likely than non-participants to meet students on their floor with whom they have things in common? This study suggests that living-learning community participants are more likely than comparison group students to find students on their floor with whom they have things in common. Table 46 illustrates that comparison group students (14.2%) were more likely than SIRP participants (7.4%) to

"Disagree somewhat" with the statement "I have found students on my floor with whom they have things in common." Additionally, SIRP participants (53.4%) were more likely than non-participants (47.2%) to "Agree strongly" with finding students on their floor with whom they had things in common. Table 47 summarizes additional findings on this variable, including that students of color in a SIRP (50.0%) were far more likely than their counterparts in the comparison group (35.4%) to "Agree strongly" with finding other students on their floor with whom they had things in common.

These differences could be due to several factors related to student self-selection into SIRP programs. It is possible that students who join some of the SIRP programs interact more frequently with other students who are of the same race or ethnicity, or who share aspects of their social identity. Moreover, because students of color in a SIRP were more likely than their counterparts to participate in programs and activities in their residence hall, and were more likely to hold a leadership position, they may derive other outcomes from this involvement such as enhanced social interactions with their peers, and positive feelings related to finding other students with whom they have things in common.

As shown in Table 48, junior-year SIRP participants (54.4%) were more likely than junior-year comparison group students (36.5%) to "Agree strongly" with finding other students with whom they had things in common. These same SIRP participants (4.4%) were far less likely than junior year comparison group members (11.1%) to "Disagree strongly" with this variable. Although it is not clear why only junior-year SIRP participants derived these outcomes, it is possible that these findings also relate to student selection to a SIRP. UMass Amherst housing policy permits junior and senior-

year students to live either on- or off-campus. Each year the majority of these students elect to reside off campus. Because the housing assignment system rewards seniority, it is likely that junior-year students assigned to a SIRP have requested that assignment. The fact that these students choose to live in a SIRP from among more options suggests that many Juniors may be more invested in the SIRP program than first-year and sophomore year students. It also is possible that the junior-year students who remain as participants in a SIRP are those who have established a peer group in that setting, and those students who did not derive this benefit may have elected to another residence hall or off-campus.

> In their discussion of learning communities, Strange and Banning (2001) wrote
>
> individuals are most attracted to and involved in groups of people who share interests and activities and that such groups are most likely to reinforce those interests and activities as congruence between personal needs, skills, and environmental rewards is maximized. (p. 147)

This perspective suggests that SIRP participants who self-select to live in a small group setting with others who share their lifestyle preferences or social identity should derive increases in their involvement with their peers and with students with whom they have things in common. Therefore, this finding of difference between SIRP participants and comparison group students on this variable is not surprising.

Finally, it is interesting to note that only one survey in this study's literature review on living-learning community outcomes reported data on variables that are similar to the "I have found students on my floor with whom I have things in common" item on the SIRP survey. The findings in the SIRP survey appears to contradict Clarke and his colleagues' (1988) research which found that students in living-learning

communities with formal goals "reported less satisfaction with their relationships and friends" (p. 9).

Do SIRP participants express more confidence that they will return to UMass next Fall than non-participants? As previously discussed, the survey data suggested that SIRP participants expressed less confidence than comparison group students that they would return to the university next Fall. Table 49 highlights that comparison group students were more likely (68.9%) than SIRP students (59.2%) to respond that they were "completely certain I will return" to UMass next Fall. Moreover, SIRP students were more likely (16.1%) than non-participants (7.6%) to indicate that they were "completely certain they will not return" to UMass next Fall.

This finding appears to contradict basic assumptions on outcomes related to living-learning community participation. As a result, the decision was made to recode the SIRP data to exclude seniors and 5th year students from the survey pool based on the assumption that SIRP programs might include a larger number of students of this rank who plan to leave the university due to graduation, versus other forms of attrition. A crosstabulation of responses and Chi Square statistical test on new survey sample pool yielded a finding of significant difference between the SIRP and comparison group on this variable. As demonstrated in Table 50, the comparison group students were still more likely (74.6%) than SIRP participants (65.7%) to respond that they were "completely certain I will return" to UMass next Fall. As well, SIRP participants were more likely (7.0%) than comparison group students (2.1%) to indicate that they were "completely certain they will not return" to UMass next Fall.

As previously discussed, there were two instances in this study where comparison group students appeared to enjoy more favorable outcomes than SIRP students. These two instances involved the variables (a) "I fit in at UMass." and (b) "How certain are you that you will return to UMass next Fall?" Although it remains unclear what factors contributed to these findings, two possibilities merit further discussion. As previously discussed, UMass Amherst experienced an unexpectedly strong yield on first-year student admission acceptances in the 2001/2002 academic year. This led to an over-subscription problem in the residence halls, which may have forced a substantial number of students into a SIRP assignment who did not prefer that housing. Students who defaulted into the program may have had a less satisfactory residential experience which contributed to them indicating that they were less likely than comparison group students to "return to UMass the next Fall." Unfortunately, the SIRP survey did not include a question relating to student preferences with their housing assignment and the SIRP program. Therefore, it is not possible to test this hypothesis with the data that is currently available. In further studies, this variable should be included.

The SIRP survey included a variable for SIRP participant response that read "Which of the following best describes the extent to which your SIRP met your expectations?" A cross-tabulation of responses and Chi Square statistical test was conducted to study the relationship between SIRP students responses on this variable and the variable "How certain are you that you will return to UMass next Fall?" As reported in Table 51, this test suggested that there was a significant positive relationship between student plans to return to UMass in the Fall, and the degree to which the SIRP

program met their expectations. For example, 80.4% of students who reported that the SIRP program met "All" of their expectations were completely certain they would return to UMass, compared to 38.1% of the students who reported that the SIRP met a "Few" of their expectations.

The survey also included a variable for only SIRP participant response that read "How satisfied are you with your SIRP overall?" A cross-tabulation of responses and Chi square statistical test was conducted to study the relationship between SIRP responses on this item and the variable "How certain are you that you will return to UMass next Fall?" There were no significant findings on the relationship between SIRP participant responses on these two variables.

These data suggest that the significant differences observed between the comparison group students and SIRP participants on the two variables (a) "I fit in at UMass." and (b) "How certain are you that you will return to UMass next Fall?"may result from SIRPs not fully meeting the expectations that students hold for these programs. Unfortunately, the data do not demonstrate if the students who reported that the SIRP did not meet their expectation are students who preferred to live in the living-learning communities or if they are those students who accepted an assignment to the SIRP because it appeared to be the best option available at a difficult time. These questions raise issues for further research on living-learning community outcomes.

Other Observations

The SIRP data were examined in a number of ways in this study to identify if there were significant findings of difference between the full SIRP and comparison group students population on the outcomes measures highlighted in twelve research questions posed earlier in this chapter. These data were also examined to identify those cases where the findings of difference were applicable only to a subset of the students that comprised the survey sample. Because so much information could be gleaned from the data, it was necessary to look at it in a number of different ways. These observations will be discussed here.

The literature review in this study did not uncover any research on outcomes that students of color derive through their participation in living-learning community programs. This appears to be due mainly to limits that are imposed by the small experimental groups samples in the research, and the fact that no other studies were found involving programs based on a cultural theme that is similar to many of the SIRP programs. Nevertheless, the SIRP survey involved a substantial number of students of color in both the control and experimental groups and, as previously discussed, significant differences were observed between the students in these two groups on the following social integration variables: (a) Are you involved in an extracurricular activity? (b) Do you hold a leadership position in your residence hall? (c) How many educational programs or organized social events have you attended that were sponsored by your residence hall? and (d) I have found students on my floor with whom I have things in common. In every case students of color participants (or only female students of color) in a SIRP program had a more favorable score than their counterparts in the

comparison group. This pattern continued with three additional variables including the frequency these students (a) worked on a paper or project where you had to integrate ideas from various sources, (b) had serious conversations with students on your floor of a different race or ethnicity, and (c) had serious conversations with students whose beliefs, values, or opinions are different from your own. These findings of difference between students of color in a SIRP and those in the comparison group on variables relating to involvement with extracurricular activities and with their peers are important. As previously discussed, involvement in these two aspects of college life has been shown to result in significant gains with a variety of issues including academic achievement, satisfaction with college, leadership skill and critical thinking skill development and cultural awareness (Astin, 1993). As well, a student's experience with diversity activities has been shown to lead to gains in cognitive and affective development, especially with regard to increased cultural awareness, with increased commitment to promoting racial diversity, and with increased satisfaction with their overall college experience (Astin, 1993). The implications of these findings will be discussed in Chapter 5.

The SIRP survey also found several significant differences between SIRP participants and comparison group students that were class-year specific. In particular, first-year and sophomore SIRP students were more likely than their counterparts in the comparison group to attend educational programs or organized social events that were sponsored by their residence hall. As well, first-year SIRP participants were more likely to hold a leadership position in their residence hall. These findings offer support to Pike's (1997) research suggesting that first-year students in a living learning community

had significantly higher levels of involvement, interaction, and integration than did students in traditional residence halls. It is also interesting to note that both the SIRP study and Pike's (1997) research, which was conducted at the University of Missouri, Columbia, appear to contradict Astin's (1993) assertion that although first-year students at most large universities have the advantage of living on campus in residence halls, those facilities are not properly designed to facilitate the development of meaningful peer group relationships.

None of the literature on living-learning community outcomes reviewed in this study included data on outcomes specific to upper-division students. This also may be due to the small number of cases in the experimental sample groups in studies that involve students from all class years. As well, it appears that most of the research on living-learning communities outcomes related to student involvement and integration concerns programs that have been designed to accommodate only first-year students. This study found that Junior-year SIRP students were more likely to socialize with students they met on their floor. These SIRP students also were more likely than their counterparts in the comparison group to be involved in an extracurricular activity on campus. These findings on upper-division student involvement in positive behaviors within the living-learning community is encouraging because the principal teachers of students outside the classroom are other students. The literature on student learning suggests that in many aspects of campus life, including definitions of success, the importance of learning and what constitutes acceptable conduct, students determine the standards and teach them to each other (Levine, 1994). It is interesting to consider that the positive behaviors expressed by upper-division SIRP students may provide an

important reference point for first-year students. Perhaps as first-year students become integrated into the living-learning community, the attitudes and behaviors expressed in the group by these upper-division students may help clarify social norm expectations for new community members.

Findings Among SIRPS

A second area of interest with this study concerns the comparison of student outcomes among the SIRP programs. A one-way analysis of variance (ANOVA) test was conducted to compare the scale mean scores among the SIRP programs. This test also was used to compare the mean scores on two individual survey variables including reported GPA and average number of hours students spend studying each week. A Tukey HSD post-hoc comparison test was conducted to identify ANOVA results that are significantly different among the SIRP programs. These tests suggested that there were no significant differences among the SIRP programs on either the residential experience or institutional commitment scale, or on the amount of time students spend studying each week. However, significant differences were observed among SIRP programs on mean GPA, and on five scales including, (a) positive academic behavior, (b) academic work with peers, (c) positive academic climate, (d) diversity engagement, and (e) interpersonal competence. Table 52 highlights scale and GPA mean scores by SIRP, and Table 53 provides a detailed summary of significant findings among the SIRP programs on the five scales mentioned above.

Significant differences were found on the positive academic behavior scale among SIRP programs ($F(9, 283) = 4.061$, $p = .000$). On this scale the 2 in 20 ($m = 3.90$,

sd =.976), Field Wellness (*m* = 3.87, *sd* = .837), Harambee (*m* = 3.86, *sd* = .791) and Greenough Wellness (*m* = 3.67, *sd* = .960) programs each had significantly higher mean scores than Asian/Asian-American (*m* = 2.94, *sd* =.904) SIRP.

Several significant differences also were found among the SIRP programs on the academic work with peers scale (F(9, 285) = 2.194, p = .005). Tukey HSD post-hoc testing revealed that Harambee students (*m* = 3.09, *sd* = 1.07) had significantly higher mean scores than International (*m* = 2.23, *sd* = 1.17), Greenough Wellness (*m* = 2.00, *sd* = .842), and Field (*m* = 2.03, *sd* = 1.11) program participants on this scale.

The one-way ANOVA test suggested that there was a significant difference among the SIRP programs on the positive academic climate (F(9, 286) = 2.894, *p* = .003). Tukey HSD post-hoc tests revealed that Cashin Wellness (*m* = 3.85, *sd* = .357), Field Wellness (*m* = 3.67, *sd* = .574) and Greenough Wellness (*m* = 3.47, *sd* = .713) participants all had significantly higher and more favorable mean scores that the Asian/Asian-American (*m* = 2.99, *sd* = .688) SIRP.

A significant difference among the SIRP programs was observed on the diversity engagement scale (F(9, 285) = 2.685, *p* = .005). On this scale Harambee participants (*m* = 3.92, *sd* = .859) were found to have a significantly higher mean score than Asian/Asian-American SIRP students (*m* = 3.02, *sd* = .968).

This survey also found a significant difference among the SIRP program on the interpersonal competence scale (F(9,286) = 2.477, *p* = .010). Testing revealed that Cashin Wellness (*m* = 3.50, *sd* = .392), Field Wellness (*m* = 3.31, *sd* = .616) and 2 in 20 participants (*m* = 3.28, *sd* = .450) each had significantly higher mean scores that the Asian/Asian-American (*m* = 2.78, *sd* = .593) students.

Finally, a significant difference was found among SIRP programs on the individual variable of GPA ($F(9, 261) = 5.852$, $p = .000$). Tukey HSD testing suggested that Field Wellness ($m = 3.57$, $sd = .383$) had a significantly higher mean score than the Native American SIRP ($m = 2.84$, $sd = .524$) and Harambee ($m = 3.01$, $sd = .476$) participants. The International program SIRP ($m = 3.41$, $sd = .481$) had a significantly higher mean score than the Native American ($m = 2.84$, $sd = .524$) participants. A total of five SIRP programs including Field Wellness ($m = 3.57$, $sd = .383$), Cashin Wellness ($m = 3.45$, $sd = .436$), International ($m = 3.41$, $sd = .481$), Greenough Wellness ($m = 3.21$, $sd = .515$), and Nuance ($m = 3.12$, $sd = .686$) each had a significantly higher mean score than the Asian/Asian-American ($m = 2.69$, $sd = .649$) SIRP.

The data presented in Table 52 provides a summary of these findings and serves to highlight the following information. Of the 23 total findings of difference in outcomes among the SIRPs, 15 or 65% involve the Asian/Asian-American SIRP, and in every case this SIRP reports a less favorable score on the outcome measure. Table 53 also clarifies that the findings of difference on outcomes among SIRPs other than the Asian/Asian-American program only involve the variables (a) academic work with peers, (b) positive academic behavior, and (c) GPA. These data suggested that there actually were few differences with outcomes among the SIRP program, and that more discussion of the Asian/Asian-American program was warranted.

The Residence Director who served as the live-in professional staff member for the Asian/Asian-American SIRP at the time of the survey reviewed the data and discussed several factors that may have contributed to these findings. He suggested that many of the students who elected to join this program believed that by living with other

students of Asian heritage, they would enjoy a more safe and comfortable living environment as a minority student on a large and predominantly White campus. He hypothesized that if their primary reason for joining the program was to feel more safe they may have limited their social contact to a small group of peers instead of actively joining the larger community of students living on their floor. Many of the students in this SIRP during the 2001/2002 academic year were first-generation Americans and first-generation college students who described themselves as either Chinese-American, Cambodian-American and Vietnamese-American. The Residence Director indicated that many of these students did not feel proficient with English and many spoke with heavy accents. As a result, they chose to limit their social contact to other students of their national origin, and therefore they were less likely to assume leadership positions within their community or join an extracurricular activity. The Residence Director, who during this discussion identified himself as Chinese, indicated that there are significant cultural differences between different Asian groups that may actually inhibit interaction between participants in the Asian/Asian-American SIRP. For example, he mentioned that it not uncommon for the Cambodian-American and Vietnamese-American students to not interact with each other. It is possible that the Asian/Asian-American SIRP survey scores may have been affected by these circumstances. However, other factors that have not been considered also may have affected these outcomes. Also it is not clear if these findings are an unexplained anomaly, or if they accurately represent the norm for participants in the Asian/Asian-American SIRP. Clearly, more study is needed to determine if there really are extensive differences among programs, and to help determine their cause.

Finally, the survey data relating to differences in outcomes between the Harambee program and the International Program, Greenough Wellness and Field Wellness SIRPs on the scale academic work with peers also was reviewed with Residence Life professional staff. On this measure, the Harambee SIRP was found to have a significantly different and more favorable score. It is interesting to note that the motivation and positive work performance of the Resident Assistant staff member assigned to the Harambee SIRP was mentioned as one of the primary factors that may have contributed to these gains for Harambee program participants.

Comparison of RAP and SIRP Survey Data

The final area of interest with this study concerns a comparison of outcomes between the RAP and SIRP living-learning community programs. However, consideration should be given to the differing goals and structures of the two program types when reviewing outcome data. The RAP programs are organized around an academic theme. Each offers participants a structured classroom experience, and students must qualify academically and accept an invitation by their department to participate in several of these programs. The SIRP programs are less structured; they are not organized around an academic theme, and participants do not enroll in classes together. This comparison involves data derived from two separate surveys that were administered on different timelines, and involved different populations. The RAP survey was conducted by telephone in December 2000, and the SIRP survey was hand delivered to students in their rooms in April 2002. As well, the RAP survey sample involved only first-year students with one semester of college experience, and the SIRP

survey was administered late in the Spring semester and involved undergraduate students from all class ranks. Therefore, it should be understood that the following discussion comparing the outcomes of living-learning community participation between the RAP and SIRP programs is not derived from the same statistical analysis techniques employed with other aspects of this study.

Stassen's (2003) report on outcomes associated with participation in a RAP program involved four scales and six individual survey items that were also included in the SIRP survey. The individual variables that are the same between the RAP and SIRP surveys are (a) how often this year have you had serious conversations with students on your floor of a different race or ethnicity, (b) how often this year have you had serious conversations with students on your floor whose beliefs, opinions or values are different from your own, (c) how difficult has it been for you to get involved in extracurricular activities here at UMass, (d) on average how many hours per week do you spend studying or doing homework, (e) how often this year have you worked on a paper or project where you had to integrate ideas from various sources, and (f) GPA.

The four scale measures included in this discussion are a) institutional commitment, b) academic work with peers, c) positive academic behaviors, and d) positive learning environment. These scales in the RAP and SIRP surveys are similar, but in each case they involve a small number of different variables. This variability between RAP and SIRP scales also limits the validity of any comparisons made between outcomes on these measures. A summary of the four scales and the individual variables that constitute the RAP and SIRP scales and their alpha reliability scores is provided in Table 54.

Finally, as reported in Table 55, Stassen's (2003) data analysis involved ANOVA testing and mean score comparisons for each of the six individual survey variables, although only GPA and hours studying each week involved numeric or interval measures. On the other hand, this SIRP dissertation study followed data analysis literature suggesting that nonparametric tests should be employed with data that are not derived from interval or ratio scales. These tests do not require that variables be normally distributed or measured on an interval scale (Rudestam & Newton, 1999). Accordingly, the SIRP study used a crosstabulation of responses and Chi Square statistical tests to study the difference between SIRP participants and comparison group students on these four variables. On the two individual variables that included numeric or interval measures, GPA and hours spent studying each week, and on the five scales common to both studies this SIRP study employed data analysis techniques that were similar to Stassen's (2003) study.

As summarized in Table 55, the RAP and SIRP surveys suggested that there were significant differences with a variety of outcomes between students who participated in a living-learning community and those students in the comparison group with each study. For example, a significant difference was found between RAP participants (3.49) and their comparison group (3.39) with the mean score on the institutional commitment scale, which suggests that RAP students are more committed to the institution than comparison group students. No significant difference was found between SIRP participants (3.16) and their comparison group (3.16) mean scores on this measure.

A significant difference was found between RAP participants (3.50) and their comparison group (3.65) with scores on the individual variable related to the level of interaction with students from different race and ethnicity groups. Interestingly, the RAP comparison group students recorded a more favorable mean score than RAP participants on this variable. A significant difference also was found between the SIRP participants and their comparison group respondents on this variable, with SIRP students indicating that they were more likely to have inter-racial/ethnic conversations than their counterparts (chi square = 15.146, p = .004).

This study suggests that SIRP students were more likely than their comparison group to have serious conversations with students whose beliefs, opinions, or values were different from their own (chi square = 14.180, p = .007). No such difference was found to exist between the RAP participants' (3.39) and RAP comparison group students' (3.32) mean scores. A significant difference was found between SIRP students and comparison group scores on the difficulty of getting involved in extra-curricular activities at UMass (chi square = 5.205, p = .023), showing that SIRP participants reported less difficulty in getting involved in extra-curricular activities. No significant difference was found between RAP students (3.17) and their comparison group students (3.21) on this variable.

RAP participants (3.24) recorded significantly higher mean score than comparison group students (2.82) on the academic work with peers scale, meaning that RAP students were likely to study and discuss course work with their peers. No significant difference was observed between SIRP participants and their comparison group on this scale.

A significant difference was found between RAP students (3.55) and the comparison group (3.38) mean scores on the positive academic behavior scale, meaning that RAP students were more likely than comparison group students to prepare for class, participate in class discussions and discuss course materials with others outside of class. No significant difference was observed between SIRP participants and comparison group students on this measure.

Stassen's (2003) study also found a significant difference between RAP student (12.95) and comparison group (10.90) mean scores on the variable concerning the average number of hours students spent studying each week. The difference observed between SIRP participant (14.60) and their comparison group (13.53) mean scores on this variable did not achieve a significant level.

RAP student (2.72) mean scores were significantly different than comparison group student (2.58) scores on the positive learning environment scale, meaning, in part, that they were more likely to know a professor who was interested in their academic success and who had inspired them better than they thought they could. No significant difference was found between SIRP student and comparison group means scores on this scale.

Finally, a significant difference was found between RAP students' (3.21) and comparison group students' (2.90) mean scores on the individual variable concerning work on a paper or project requiring the integration of ideas from various sources, meaning they had more frequently worked on a paper or project that required such an integration of ideas from various sources. A significant difference also was found between SIRP participants and comparison group students on this measure (chi square =

9.942, $p = .041$), showing SIRP participants having to work on such papers more often than their counterparts.

In summary, Stassen's (2003) study focused primarily on the academic integration of student participants in the RAP programs. Her research found significant differences between RAP participants and comparison group students on academic integration variables including peer interaction, academic behaviors and academic climate in the living-learning community.

The findings of difference between these two groups, and the fact that RAP students report the more favorable scores on each of these variables is not surprising when one considers the program goals and support structures that have be established to support RAP living-learning communities. On the other hand, Stassen's (2003) research found only one difference between RAP participants and comparison group students on three individual variables that were designed to study the social integration of students at the university. The significant difference was found on the variable "How often have you had conversations with students of a race or ethnicity other than your own?" and it was the comparison group students who recorded the more favorable score.

In many ways the SIRP survey was modeled on Stassen's (2003) research, however, it was focused primarily on the social integration of SIRP participants. This research resulted in findings of significant difference between SIRP and comparison group students on each of the three social integration variables that the two surveys had in common including (a) How often have your had conversations with students of a different race or ethnicity other than your own? (b) How often have you had serious conversations with students whose beliefs, opinions or values are very different from

your own? and (c) How difficult has it been for you to get involved in extra-curricular activities here at UMass? These findings and the fact that SIRP students reported the more favorable score on each of these variables is not surprising when one considers the program goals and educational and social programs that are offered in SIRP living-learning communities.

Stassen (2003) suggested that the consistency and strength of the relationship between RAP participation and significant gains with multiple factors related to academic integration were particularly interesting given that all the students in this study (LC and non-LC) live in residence halls, where one might expect that the opportunity to integrate the academic and social lives of college may come naturally. However, these results seem to support Tinto et al.'s (1994) assertion that residence hall life may not support the integration of social and academic life, and in that environment, LCs (even modest ones) can offer a valuable service to students' academic life (p. 607). It also appears that the findings of the SIRP survey support Tinto and his colleagues' (1994) argument, and raise additional questions regarding program goals, structures and outcomes related to living-learning communities of various types.

Analysis of Research Questions

There were three broad research questions posed in this study. The first question is what are the outcomes associated with participation in all living-learning communities at the university? The second question asks if participants in the more structured and academically oriented living-learning communities at the university derive different outcomes than students involved in the less structured programs that are

not organized around an academic theme. The third question is what are the differences in outcomes between students involved in living-learning community programs and students who reside in traditional residence hall settings that do not provide a living-learning program? These three questions are discussed below.

What are the Outcomes Associated With Participation in All Living-Learning Communities at the University?

As shown in Table 56, the SIRP and RAP surveys found an extensive number of positive outcomes relating to living-learning community participation at the University of Massachusetts, Amherst. In total, there were fourteen positive outcomes and two negative outcomes associated with participation in a SIRP program, and eleven positive outcomes and one negative outcome associated participation in a RAP living-learning community. Table 56 also highlights that these outcomes include various measures of academic and social integration that are discussed in the literature on living-learning communities, and include important factors such as GPA achievement, time spent studying, involvement with peers on academic activities, engagement with peers on issues related to diversity, and involvement in formal extracurricular activities. These findings are consistent with the research on living-learning community outcomes, and are impressive when one considers the relationship between these outcomes and student academic development, personal development, satisfaction, and persistence (Astin, 1984, 1985, 1993; Pascarella and Terenzini, 1991; Tinto, 1993).

It also should be noted that the SIRP study found two instances of significant difference between the samples where comparison group students reported a more favorable score (negative outcome) than did SIRP participants. Specifically, it was

determined that living-learning community participants were less likely than comparison group students to indicate that they (a) "fit in at UMass" and (b) planned to return to UMass the next Fall Semester. Stassen's (2003) research also had one negative outcome, as RAP participants reported that they were less likely than comparison group students to have serious discussions with students on their floor of a different race or ethnicity.

Do participants in the more structured and academically oriented living-learning communities derive different outcomes than students involved in the less structured programs that are not organized around an academic theme?

The SIRP survey suggested that students who participate in the more structured and academically oriented programs (RAP) do derive different outcomes than the students who are involved in the less structured programs (SIRPS) that are not organized around an academic theme. As reported in Table 56, significant differences were observed between RAP participants and comparison group students on four survey scales including (a) Academic Work with Peers, (b) Positive Academic Behaviors, (c) Positive Learning Environment, and (d) Institutional Commitment. Significant differences also were found on four individual survey variables including (a) GPA Achievement, (b) hours spent studying per week, (c) frequency of working on a paper or project that required the integration of ideas, and (d) the number of times worked on group projects. These findings highlight that RAP participants enjoy outcomes that are almost exclusively related to the expression of positive academic behaviors, and gains with intellectual orientation and academic achievement. No gains were reported for

RAP participants that related to the measures of social integration and involvement that were included in the RAP survey.

A significant difference was observed between SIRP participants and comparison group students on one survey scale, Diversity Engagement. The individual variables that comprise this scale are summarized in Table 10, and a discussion of the findings of difference between SIRP participants and comparison group students that were observed on each variable was included in Chapter 4. Significant differences also were found on three individual academically oriented variables including (a) frequency of working on a paper or project that required the integration of ideas, (b) frequency of attending class well-prepared to answer questions or engage in discussion, and (d) likelihood of finding other students on their floor with whom they discussed intellectual ideas outside of class.

The SIRP survey found that SIRP participants were more likely than comparison group students to (a) be involved in an extracurricular activity, (b) hold a leadership position in their residence hall, (c) attend programs in their building, and (d) find other students on their floor with whom they had things in common. These findings suggest that SIRP participants derive a variety of benefits through their participation in a living-learning community. Several of these benefits relate to academic matters, however, the majority of outcomes related directly to important measures of social integration including involvement with peers, and involvement in various aspects of campus life.

What are the Differences in Outcomes Between Students Involved in Living-Learning Community Programs and Students Who Reside in Traditional Residence Hall Settings that do not Provide a Living-Learning Program?

As previously discussed and highlighted in Table 56, Stassen's (2003) research and the SIRP survey suggested that living-learning community participants were more likely than comparison group students to report gains with academic achievement, intellectual orientation, and with various measures of academic and social integration. It also should be noted that the actual differences observed between living-learning community participants and comparison group students appears to be dependent on the type of program being discussed.

The SIRP survey found that students of color in a living-learning community derived different outcomes than their counterparts in a traditional residence hall on a variety of social integration measures. Students of color in a SIRP were more likely than their counterparts not in SIRPs to (a) be involved in an extracurricular activity, (b) hold a leadership position in their hall, attend educational and social programs, (d) find other students on their floor with whom they had things in common. They also were more likely to have (a) worked on a paper or project where they had to integrate ideas from various sources, (b) had serious conversations with students of a different race or ethnicity, and (c) had serious conversations with students whose beliefs, values, or opinions were different from their own.

This study also found several significant differences between SIRP participants and comparison group students that were class-year specific. First-year and Sophomore SIRP participants were more likely than their counterparts in the comparison group to attend programs or organized social events that were sponsored by their residence hall.

Moreover, first-year SIRP participants were more likely to hold a leadership position in their residence. Finally, Junior-year SIRP participants were more likely than their counterparts in the comparison group to socialize with students they met on their floor. This same SIRP cohort also were more involved in extracurricular activities on campus.

CHAPTER 5

SUMMARY, SUGGESTIONS FOR FURTHER RESEARCH, AND RECOMMENDATIONS

This chapter provides an overview of findings and offers a brief review of the three broad research questions considered in this study. The chapter concludes with recommendations for further research and a discussion of recommendations for institutions regarding living-learning community development.

Overview of Study

This study was influenced by Stassen's (2003) research on the outcomes associated with student participation in the RAP living-learning communities at UMass, Amherst. The central issue explored in her study was "whether modestly constructed learning communities can produce the type of positive outcomes and learning experiences that the more coordinated (resource intensive) learning communities have shown in the growing research on learning communities" (p. 606) Her study determined that the "more modest" RAP programs produced many of the positive outcomes that the learning community literature suggests and that institutions hope for when they develop learning communities (Stassen, 2003).

The purpose of this study was to assess the impact of student participation in the SIRP living-learning community programs at UMass, Amherst to determine if these programs, which are even less structured than RAP, can produce outcomes that have been reported in the literature. Table 1 and Table 2 provide a background on key differences between the RAP and SIRP programs and help demonstrate that the SIRP

living-learning communities are more modest and less structured than those studied by Stassen (2003).

Overview of SIRP Survey Findings

The results of this study suggest that modest, less structured living-learning community programs can produce outcomes that have been attributed to model programs that are discussed in the literature. The SIRP survey data also appear to provide substantial support for scholars who have argued that important educational outcomes such as increased levels of academic and social integration and gains with intellectual activities can be attributed to student participation in living-learning communities (Astin, 1993; Kuh, Schuh & Whitt, 1991; Lenning & Ebbers, 1999; Pascarella & Terenzini, 1991).

Social Integration

The most significant findings in this study were that SIRP living-learning community participants were (a) more involved in co-curricular activities, and (b) more involved with their peers on a variety of activities than comparison group students. These findings are particularly important in light of Astin's (1984, 1993) research which suggested that student involvement is the single most important determinant of what a student derives from a college education. This research also suggested the more students are involved with their peers in both academic related and non-academic interests the greater their growth during college. The importance of student involvement and interaction with peers also was emphasized by Pascarella and Terenzini (1991) who

found two persistent themes in the literature on college effects on student learning and development. The first theme involves the importance of other people, particularly other students and faculty, with student learning. It appears that these groups help to define and enhance learning environments that stimulate learning of various types. The second theme concerns the importance of students' effort and involvement in the academic and non-academic systems of the institutions they attend. The literature strongly suggests, the greater the effort and personal investment the student makes with academic pursuits and in the life of the college the greater the outcomes they yield.

As discussed in Chapter Four, this study's review of the literature on living-learning community outcomes uncovered little research on (a) participation levels in formal extra-curricular activities on campus, and (b) involvement with their peers on non-academic matters. In addition, the few studies that addressed these themes employed different measures of student involvement. Nonetheless, in one of the few studies that considered these variables, Henry and Schein (1998) found that living-learning participants were more involved in social activities than comparison group students, which supports the findings in the SIRP study.

Intellectual and Academic Orientation

Although no significant differences were found between the two survey sample populations on the scales (a) Academic Work with Peers, (b) Positive Academic Behaviors, and (c) Positive Learning Environment, this study did find that students who participate in SIRP living-learning community programs derive significant gains with a variety of intellectual and academic activities. SIRP participants were more likely than

comparison group students to (a) attend class well-prepared to answer questions or engage in discussion, (b) find other students on their floor with whom they discussed intellectual ideas outside of class, and (c) work on a paper or project where they had to integrate ideas from various sources. The literature on living-learning community outcomes supports these findings in the SIRP survey. Bennett and Hunter (1985) found that the living-learning program in their study "provided students with the opportunity to take classroom concepts and use them in a non-academic setting" (p. 11), and Magneralla (1975) reported that ninety-one percent of the total LLC student sample said the LLC provided an atmosphere conducive to holding serious discussions" (p. 7).

However, as previously discussed, it is not clear in this study why SIRP participants, who unlike the RAP students, have no shared academic program experience, were more likely than comparison group students to express these academically oriented behaviors. On this point, Pascarella and Terenzini (1991) suggested that some of the effects of living-learning participation may be indirect. That is, the effects may be derived by interpersonal contact with other students and faculty and result from social interaction instead of the actual living-learning program features.

Whitt and her colleagues'(1999) research on the relationships between peer interactions and cognitive outcomes during college does not specifically concern living-learning community participation. However, their findings do raise several interesting questions on the relationship between SIRP program outcomes such as increases with peer interaction and involvement in campus life, and reported gains with intellectual orientation. These researchers found that student involvement is the single most important determinant of what one derives from a college education...When other

factors are taken into account, the more that students were involved with their peers in both course-related and non-course-related interactions, the greater their cognitive growth during college (p. 72). They also found that "peer interactions on non-course-related matters were the *only* interactions that had significant positive effect on objectively measured outcomes" (Whitt, et. al, 1999, p. 72). These findings suggest that SIRP participant gains with numerous variables relating to campus involvement and peer interaction may indeed contribute to significant gains with intellectual and academically related activities.

Academic Achievement

The SIRP survey results do not offer support to the argument that student involvement in a living-learning community leads to gains with various measures of academic achievement, including GPA attainment (Blimling & Hample, 1979; Blimling & Paulsen, 1979; Decoster, 1968; Duncan and Stoner, 1976; Edwards & McKelfresh, 2002; Kanoy & Bruhn, 1996; Stassen, 2003). This study incorporated self-reported GPA score as its sole measure for academic achievement, and the SIRP survey found no significant difference between living-learning community participants and comparison group students on this variable ($F(1, 489) = 1.957$, $p = .163$).

As previously discussed, unlike Blimling and Hample's (1979) study floors, Kanoy and Bruhn's (1996) first-year living-learning program, or the RAP programs at UMass, each of which was designed to promote academic success, the SIRP programs offer no formal academic support structures or services. Therefore, it is not surprising

that SIRP living-learning community participants did not derive a higher GPA than comparison group students

Other Findings

The SIRP survey found that students of color in a living-learning community derived different outcomes than their counterparts in a traditional residence hall on a variety of social integration measures. Students of color in a SIRP were more likely to (a) be involved in an extra-curricular activity, (b) hold a leadership position in their hall, (c) attend educational and social programs, and (d) find other students on their floor with whom they had things in common. They also were more likely to have (a) worked on a paper or project where they had to integrate ideas from various sources, (b) had serious conversation with a student of a different race or ethnicity, and (c) had serious conversation with students whose beliefs, values, or opinions were different from their own.

The study also found several significant differences between SIRP participants and comparison group student that were class year specific. First-year and Sophomore SIRP participants were more likely than their counterparts in the comparison group to attend programs or organized social events that were sponsored by their residence hall. Moreover, first-year SIRP participants were more likely to hold a leadership position in their residence. Finally, junior-year SIRP participants were more likely than their counterparts in the comparison group to socialize with students they met on their floor, and were more involved in extracurricular activities on campus.

Discussion

The SIRP survey data and Stassen's (2003) research provided a background for the discussion of the three broad research questions examined in this study. The first question was "what are the outcomes associated with participation in all living-learning communities at the university?" As discussed in Chapter Four, the SIRP survey and Stassen's (2003) research found twenty-five positive outcomes that were associated with participation in a living-learning community program at UMass, Amherst. As summarized in Table 54,fourteen of these outcomes were related to participation in a SIRP and eleven involved the RAP programs. These outcomes included various measures of social and academic integration that are discussed in the literature on living-learning communities such as time spent studying, involvement with peers on academic activities, GPA achievement, interaction with peers on issues related to diversity, and involvement in extra-curricular activities.

The SIRP survey also found two instances of significant difference between the samples where comparison group student scores were found to be more favorable then SIRP participants. This included the variables "I fit in at UMass" and "How certain are you that you will return to UMass next Fall?" Stassen (2003) had a similar finding in her study related to the variable, how often during this year have you "Had serious conversations with students on your floor of a different race or ethnicity than your own?" A discussion of these findings was provided in Chapter 4.

The second broad question in this study was "do participants in the more structured and academically oriented living-learning communities derive different outcomes than students involved in the less structured programs that are not organized

around an academic theme?" The SIRP survey suggested that students who participated in the more structured and academically oriented programs (RAP) do derive different outcomes than students who are involved in the less structured programs (SIRP). As reported in Table 54, RAP students derived outcomes that related directly to increases with academically oriented variables including GPA achievement, time spent studying, and they were more likely to interact with their peers on various academic integration measures. On the other hand SIRP participants were more likely than comparison group students to be involved in various extra-curricular activities on campus, and they were more likely to interact with their peers on a variety of social integration measures including those related to diversity issues.

The third question in this study examined the differences in outcomes between students involved in living-learning community programs and students who reside in traditional residence hall setting that do not provide a living-learning program. This study found that students of color (only female students of color with some variables), in a SIRP derived different outcomes than their counterparts in traditional halls on several variables. These students were more likely to be involved in a variety of extra-curricular activities. They also were found to socialize more frequently with other students in their building and they were more likely to engage in behaviors related to issues of diversity.

Finally, as discussed above, first-year and Junior-year SIRP participants were more likely than students who resided in a traditional residence to become involved in a variety of campus activities, to attend educational and social programs in their residence halls, and to socialize with students they met in their building.

As these results demonstrate, significant differences were observed between living-learning community participants and comparison group students on a variety of outcome measures discussed in this study. These findings have important implications for higher education theory, research and practice. The SIRP survey and Stassen's (2003) research suggests that students' out-of-class experiences can have a positive effect on learning and these findings lend support to recommendations made by the Kellogg Commission Report, Returning to Our Roots; The Student Experiences (1997) and National Institute of Education Report, Involvement in Learning: Realizing the Potential of American Higher Education (1984). These reports indicated that students and institutional environments both contribute to student learning, and they argued that the key to enhancing student learning and personal development is not simply for faculty to teach more and better, but also for institutions to create conditions that motivate and inspire student to devote time and energy to educationally-purposeful activities, both in and outside the classroom. These studies argued that universities should create learning communities as one means to provide students with "seamless learning environments" to promote student learning and development both within and outside of the traditional classroom setting. Clearly, the SIRP survey data and Stassen's (2003) research lend support to the literature on living-learning community outcomes, and also suggest that residential learning communities represent one method of bridging the gap between students' in- and out-of-class experiences and with providing students with a seamless learning environment described in the literature.

The data also suggest that modest living-learning community models, such as the SIRPs, that do not include an academic component can derive some of the outcomes

that are discussed in the literature. The SIRP data indicate that participation in these low structure living-learning community programs have a significant impact on day-to-day college experiences, such as co-curricular involvement and interaction with peers, and other factors relating to social integration. These findings are consistent with theory and research on how college affects students in general, and how living on-campus affects students in particular (Pascarella and Terenzini, 1991; Terenzini, Pascarella, and Blimling, 1996).

Moreover, the data also suggest that participants in these modest living-learning communities can derive gains with various measures of intellectual engagement. For example, SIRP participants were more likely to attend classes well-prepared, and to answer questions or engage in class discussions than comparison group students. These results are consistent with several other studies on living-learning community outcomes (Pascarella and Terenzini, 1980; Pike 1997). In fact, Pike (1997) found students in residential learning communities did have significantly higher levels of involvement, interaction, integration, and learning and intellectual development than did students in traditional residence halls…A second finding to emerge from this study was that learning communities tended to exert a positive direct effect on day-to-day behavioral aspects of student's college experiences and indirect effects on the integration of information and student learning (p. 9).

Finally, this study also found that different living-learning community program structures and themes derive different outcomes. It was determined that students who participated in the more structured and academically oriented programs (RAP) derived different outcomes than students who were involved in the less structured programs

(SIRP) that do not involve an academic component. As reported in Table 54, RAP students derived outcomes that related directly to increases with academically oriented variables, while SIRP participants derived outcomes related to social integration and engagement in diversity issues. In fact, the differences between the SIRP and RAP programs were so great that there were similar findings of a positive outcome on only two of the twenty-four variables the surveys had in common including (a) worked on a paper or project or paper which required the integration of ideas from various sources, and (b) attended class well-prepared to answer questions or engage in discussion.

These findings are significant for several reasons. As previously discussed, the current literature on living-learning communities suggests that such programs vary greatly; from highly structured models that provide an integrated curriculum, promote increased faculty-student contact, and deliver specialized services to students on-site, to less structured programs that provide opportunities for students to meet informally to discuss academic and social concerns and interests. Lindblad (2000) suggested that most of the research on living-learning community outcomes has involved "higher-end" more resource-dependent programs that often incorporate and integrated curricula, frequent faculty-student contact, and on-site services. However, the reality is that many campuses cannot support these more expensive models, and that has resulted in the development of more modest programs.

As a result, Stassen (2003) argued that it was important to study the full range of learning community models to determine the extent to which less formal and less resource-dependent programs can achieve desired student outcomes similar to those that are possible for the more structured and more expensive models. She also suggested

that further research was needed on the full range of living-learning community programs on individual campuses and across institutions. This is because "some of the most positive and widely disseminated results on the impact of learning communities are derived from data that did not include a full sampling of the learning communities on the campus studied" (Stassen, 2003, p. 586). Therefore, it is possible that the positive outcomes generally attributed to living-learning communities actually result from a small number of model programs that receive the most attention and support, and not the full range of programs that actually exist on the campuses studied. It is plausible that the findings on student outcomes would be substantially different, in some cases, if the study had included all living-learning communities that existed on the campus involved.

This dissertation study recognized some the research and related data problems that prompted questions in the literature on the impact of living-learning community participation on students. The outcomes derived through participation in the full range of living-learning communities on the UMass, Amherst has been documented, and this research should serve to broaden the scope of what is known about outcomes associated with participation in living-learning communities. Moreover, this study suggested that positive outcomes can be derived from low-end living-learning programs of various types. These findings suggest that campuses should develop living-learning community programs to support undergraduate student learning even if these structures are modestly designed and low cost.

Further Research

This study involved a secondary analysis of administrative data that was derived from two separate surveys that were administered on different timelines, and involved different populations. Therefore, the data used in the discussion comparing outcomes between the SIRP and RAP programs were not derived from the same statistical analysis techniques used with other aspects of the study. If this study were to be repeated, it should be conducted for both the SIRP and RAP living-learning program participants at the same time of year, using the same instrument for the two groups. This would provide more robust data for a comparison of outcomes between these two living-learning community populations.

The SIRP and RAP surveys represented the first attempts by the University to study the outcomes associated with living-learning community participation. The goals for each survey included documenting student outcomes to broaden understanding of the programs' effectiveness, gathering data to inform program development decisions, and providing a baseline of information to guide future research on these programs. Therefore, this study, or a similar project, should be conducted longitudinally, to assist the University in determining if the findings within the SIRP and RAP programs are consistent over time. This would provide the university with a more accurate assessment of the effectiveness and value of the programs, services, and structures embedded in the SIRP and RAP programs. Both the SIRP and RAP studies chose students who resided in traditional residence halls that did not include a living-learning community program to participate in the comparison group sample. Further studies on

living-learning communities might include other residential communities at UMass, Amherst such as fraternities and sororities for inclusion in the comparison group population. On the surface, Greek organizations appear to promote many of the same social affiliation and identity goals that are promoted by the SIRP programs. Data derived from these residential communities may provide an additional dimension and new context to the discussion of outcomes related to SIRP programs. Pascarella and Terenzini's (1991) research does include a discussion of the affects of Greek society membership on educational attainment and various psycho-social measures. This literature may assist with the development of an assessment instrument and methodology appropriate for use with an extended survey pool.

As noted earlier, most of the research on living-learning community outcomes has involved the study of "higher-end" more resource-dependent programs, and not the full-range of living-learning communities that are found on many campuses (Lindblad, 2000; Stassen, 2003).

Further research is needed on the full-range of these programs on individual campuses and across institutions. In the future a study should be conducted that includes more than UMass, Amherst's living-learning community programs. Ideally, similar institutions that offer a variety of living-learning community programs, with regard to program theme and structures, would be included in the survey. The data derived from these other institutions would also serve to broaden what is known about the range of living-learning community program outcomes, and would provide an opportunity to compare data on similar program types between institutions.

Moreover, institutions that have implemented a range of living-learning community models on their campus should conduct a cost-benefit analysis on these programs to determine if the additional benefits derived by students in the high-end programs are worthy of the resources invested. This study's review of the literature on living-learning community outcomes did not uncover any data of this type, and this suggests that more research is needed on the outcomes that are derived from the full-range of living-learning programs that exist on college campuses.

The SIRP survey found that students of color who participated in a living-learning community program were more likely than their counterparts in the comparison group to (a) be involved in an extra-curricular activity, (b) hold a leadership position in their hall, (c) attend educational and social programs, and (d) find other students on their floor with whom they had things in common. These findings are not surprising given the goals, programs and social activities that are involved with these programs. However, it was surprising to learn that there was no similar research available in the literature on similar living-learning communities. More research is needed on living-learning communities, similar to SIRPs, that are organized on a social identity or lifestyle preference theme. More research involving multiple programs and larger samples also is needed to facilitate the study of outcomes among sub-populations within these communities. Hopefully, this study will pave the way for further research along these lines.

Stassen (2003) noted that not all students at UMass, Amherst are involved in living-learning communities and students are not randomly assigned to these programs. She wrote that in the SIRP and RAP programs "where controls have not been put into

place, the positive finding may be the result of student motivation and academic determination" (Stassen, 2003, p. 586). Thus, student self-selection into living-learning communities at UMass Amherst remains an issue in understanding their effect.

In many of the studies on living-learning community outcomes, the researchers suggested that is was possible that students who were most motivated to succeed to take advantage of the living-learning community opportunities, and the gains observed are the result of this self-selection, not the program components themselves (Blimling & Hample, 1979, Blimling & Paulsen, 1979; Clarke, Miser & McKelfresh, 1988; Edwards & McKelfresh, 2002; Kanoy & Bruhn, 1996; Pike, 1997; Stassen, 2003). Therefore, further research on living-learning community outcomes needs to include pretest measures to study differences between the test samples on a variety of academic and developmental variables. Moreover, perhaps a more true quasi-experimental design can be constructed where students who are invited to participate in living-learning community but cannot be accommodated are assigned to a traditional residence hall and are identified as a control for research purposes. This circumstance may eliminate the question of motivation in these studies.

Finally, Shapiro and Levine (1999) argued that a "flexible research design is essential to capture the broad picture of what student and teachers experience as members of learning communities" (p.153). Further research on living-learning communities at UMass, Amherst should involve an integrated research approach that relies on both quantitative and qualitative methods. This extended research model will assist in the study of issues that were not incorporated in the SIRP and RAP surveys including, but certainly not limited to (a) who enrolls, why they made that choice, (c)

how they behave, and (d) how participation affects students involved in a living-learning community versus those who are not in such a program.

Recommendations

The recommendations that follow have emerged from the literature on living-learning community outcomes, from Stassen's (2003) research, and from the data derived from this study. These recommendations are addressed to university leaders within student affairs and academic affairs who are responsible for the creation and administration of living-learning community programs.

Colleges and Universities Should Examine the Functioning of the Residence Halls on Their Campuses and Ensure that These Settings are Designed to Serve as Educational Environments that Enhance Student Learning

It has been demonstrated that living on-campus is one of the most significant determinants of a student's level of involvement and integration into the cultural, social and extracurricular life of the campus (Chickering, 1974; Pascarella, 1984). Resident students report more contact with their peers as well as faculty, and they report high levels of satisfaction with their institution (Chickering, 1974; Pascarella, 1984). Resident students report higher levels of social integration and they persist and graduate in greater numbers than do student who commute (Astin, 1975; Tinto, 1987). Finally, in addition to these gains with involvement, integration, satisfaction, and persistence, the research on this topic demonstrates that students who live on campus report gains in areas of personal development, such as increased levels of autonomy and self-motivation (Schroeder & Mable, 1994) For these reasons, Pascarella and Terenzini

(1991) have concluded that living in a college residence hall versus commuting to college is perhaps the "single most consistent with-in college determinant of impact" (p. 611).

Nevertheless, this study demonstrated that there were significant differences between the experiences of living-learning community participants and comparison group students on a variety of outcome measures relating to various aspects of academic and social integration. In almost every case where a difference was observed the SIRP and RAP program participants enjoyed a more favorable experience than comparison group students. These findings suggested that even the most modest, and least resource dependent programs such as the SIRP can provide participants with an enhanced living environment and experiences that make a greater contribution to student learning and development. Therefore, campuses should reexamine the role and functioning of their residence halls as purposeful educational settings.

Universities and Colleges Should Create a Variety of Living-Learning Community Programs on Their Campuses to Assist First-Year Students with Their Transition into Both the Academic and Social Life of College

Clark and his colleagues (1988) emphasized that college freshmen needed to identify a clear purpose, find useful resources, and begin to establish their identity all in their first year on campus. They also needed to identify faculty, staff and peers who could support them in their academic and social pursuits. The authors suggested that first-year students' efforts in these areas were hindered by the traditional college environment in which social development is separated from intellectual development.

The literature on living-learning community outcomes highlights that these programs are widely employed to address the issues raised by Clarke and his colleagues (Clarke, et al., 1988; Pascarella & Terenzini, 1981; Pike 1997; Stassen 2003), and this literature and the data derived in this study demonstrated that various living-learning community models can support many of the academic and social needs of first-year students. Clearly, the Involvement in Learning Report (1997) recognized both the challenge and importance of engaging new students and recommended that

> college administrators should reallocate faculty and other institutional resources toward increased service to first- and second-year undergraduate students…[and that] Classes for first-year students should be designed to provide adequate opportunities for intense intellectual interaction between students and instructors. (p. 25)

It appears that the creation of living-learning community programs may represent a viable option for campuses to address the issues raised in this report. Moreover, the finding that various program types yield positive outcomes suggests that institutions enjoy great flexibility with living-learning community design, and can tailor these programs to meet their distinct educational goals and administrative realities.

Institutions of Higher Education Should Consider Establishing Living-Learning Community Programs as a Means to Establish or Extend Community-Based Model of Education Which Encourages Learning Through Collaboration and Ties Together All Facets of Students' College Experiences

Astin (1993) highlighted that this community-based model has been employed with success in smaller, typically private, residential colleges. The research on living-learning community programs suggests that this model can be successfully adapted in a variety of institutional settings, including in large institutions where creating small

learning communities and providing opportunities for student involvement may be difficult.

Colleges and Universities Should Employ Living-Learning Community Programs to Enhance Student Involvement in Campus Life and With Their Peers

The literature on college effects on student learning and satisfaction demonstrates a strong connection to involvement with peers and with a variety of behaviors relating to campus life (Astin, 1994; Pascarella & Terenzini, 1991). For this reason, the Involvement in Learning (1984) report recommended that university leaders should "provide adequate fiscal support, space and recognition to *existing* cocurricular programs and activities for purposes of maximizing student involvement" (p. 35). This report also recommended that "Every institution of higher education should strive to create learning communities, organized around specific intellectual themes or tasks" (p. 33).

As previously discussed, the SIRP survey revealed that living-learning community participants were (a) more involved in co-curricular activities, and (b) more involved with their peers on a variety of activities than comparison group students. Stassen's (2003) research highlighted that RAP participants were more likely than comparison group students to (a) study with students on their floor for a test or exam, (b) work on homework with students on their floor, and (c) discuss courses and readings with floormates. These findings suggest that living-learning community programs may serve as excellent examples of the types of programs and activities that deserve the "fiscal support, space and recognition" to maximize student involvement as recommended in the Involvement in Learning (1984) report.

The SIRP Survey Data, Particularly Those Relating to the Level of Involvement Students of Color Express with Extracurricular Activities and with Peers, Suggest that Colleges and Universities Should Establish or Extend Living-Learning Community Programs that Allow Students with a Common Identity and/or Lifestyle to Live Together as a Community

The SIRP survey findings on the involvement of students of color in extracurricular activities and with their peers is not surprising when one considers the literature on human aggregate theory. This conceptual model suggests that individuals are most attracted to and involved in groups of people who share interests and activities and that such groups are most likely to reinforce those interests and activities as congruence between personal needs, skills, and environmental rewards is maximized (Strange & Banning, 2001, p. 147).

It appears that the use of common interest groupings is well established on college campuses today. Strange and Banning (2001) suggested that on some campuses this takes the form of living-learning communities that are in many ways similar to the SIRPs, and on other campuses specialized offices and organizations have been established to serve the needs of particular groups of students. Spitzberg and Thorndike's (1992) argued that these programs sustain "the community of parts" in an institution, in effect offering homogeneous groupings of individuals who share common cultures, experiences, and values that distinguish them from others in the setting. This is particularly important when considering involvement of those students who differ from the dominant culture and characteristics of the campus. The special office or living-learning programs become important not only as a sources of support and security for select students but also as a base from which to become involved within the larger campus (p. 148).

Kuh's (1991) research also provided support to the suggestion that living-learning community programs such as the SIRPS provide an excellent opportunity for students to become involved in the campus community. He wrote, "institutions that provide small, human-scale environments and multiple subcommunities encourage involvement…Institutions that are able to generate feelings of loyalty and a sense of specialness encourage involvement" (p. 363).

The SIRP Survey Data Suggest that Colleges and Universities Should Establish or Extend Living-Learning Community Programs that Promote Opportunities for Dialogue and Understanding of Issues of Difference and Social Identity Among Students

This study demonstrated that SIRP participants were more likely than comparison group students to (a) socialize with students on their floor, (b) have serious conversations with students of a different race, and (c) have serious conversations with students who held different beliefs, values and opinion than their own. These findings are significant as Astin (1993) has shown that these types of behaviors are associated with gains in cognitive and affective development. His research also suggested these behaviors contribute to gains in satisfaction with college experience, and an increase in students' commitment to promoting racial understanding. Astin's (1993) research also indicated that any dire claims about the detrimental effects of colleges and universities emphasizing diversity by sponsoring new student organizations, offering seminars or workshops, or creating programs such as the SIRPs that focus on issues of gender, race and ethnicity are misplaced. In fact, he wrote that, "the findings of this study suggest that there are many developmental benefits that accrue to students when institutions encourage and support an emphasis on multiculturalism and diversity" (p. 431).

In his study on living-learning community outcomes Pike (1997) argued that colleges and universities should temper expectations that a single educational intervention [living-learning communities] will have a dramatic effect on student learning and intellectual development. Student learning and development is a complex process involving diverse and sometimes contradictory influences. Given the complex milieu of the college experience, it is unrealistic to assume that any single action with fundamentally alter the nature of American higher education.(p. 10)

Nevertheless, college and university leaders are being challenged from both within and from outside the academy to enhance the academic and social aspects of undergraduate education. As suggested in the Joint Task Force on Learning Report (1998) entitled, Powerful Partnerships, the task of transforming institutions to meet the challenges of higher education must begin with collaboration between academic affairs and students affairs. Accordingly, student affairs and academic affairs staff should work in partnership to develop living-learning community programs that provide students with a seamless learning experience that blends their academic and social lives and promote interaction with faculty and their peers.

While it is clear that this single action will not fundamentally alter American higher education, new and improved living-learning community models, particularly those combining robust academic and social programs, can lead to an enhanced undergraduate learning experience on individual campuses.

Student Affairs and Academic Affairs Staff that Have Responsibility for the Creation or On-Going Development of Living-Learning Communities Should Acquaint Themselves with the Literature on Living-Learning Outcomes

As suggested in the literature review with this study, there is great variety with the themes, activities and structures of programs that are referred to as living-learning communities. Much of the research on living-learning community outcomes involves highly-structured "model" programs, and not the full range of programs that are found on individual campuses or at institutions around the country. At a result, it is not clear if the positive outcomes that are commonly attributed to these programs are truly representative of the majority of programs, or just a small segment of model programs. Clearly, those staff members who are entrusted to create or administer these programs on individual campuses will be better prepared to provide thoughtful leadership if they are fully educated on the related literature in the field.

Student Affairs and Academic Affairs Staff Should Participate in the Development and Administration of the Instruments and Procedures Used in the Assessment of Living-Learning Community Programs on Their Campuses.

Assessment should include both quantitative and qualitative measures, and the data derived through these activities should inform program decisions. Astin (1996) argued that assessment is vital tool for assisting building a more efficient and effective educational programs. In particular, he emphasized that assessment can enhance educational practices by strengthening the teaching-learning process, and by clarifying if programs, policies, and practices are effective. Clearly, student affairs staff, with their academic training, insight into student culture, and relationships with students, are in a unique position on many campuses to contribute to the development of assessment tools

that study more than cognitive outcomes, and help to extend what is known about the effects of living-learning community participation .

Conclusion

This dissertation study is significant because it recognized some of the research design and related data problems that prompt questions in the literature on the impact of living-learning community participation on undergraduate students. The outcomes derived through participation in the full range of living-learning communities on one campus has been documented, and this research helps to broaden what is known about outcomes associated with participation in these programs. This study is important because it demonstrated that students who participate in low-end and less structured living-learning community programs derive many of the same positive outcomes related to measures of academic and social integration that are reported for high-end and more structured programs. Moreover, this study found that students of color in a living-learning community were more likely than their counterparts in a traditional residence hall to derive a variety of important social integration outcomes. Finally, this study documented several significant gaps in the literature on living-learning communities programs, including but not limited to (a) outcomes associated with participation in low-end programs, (b) outcomes among sub-populations of students, and (c) research on important measures of student involvement including diversity engagement and with extracurricular activities. As previously discussed, these findings raise important questions on outcomes associated with living-learning communities and highlight the need for further research on this topic.

The results of this study suggest that living-learning communities of various types and structures can derive many of the outcomes that are described in the literature. The SIRP programs are organized to support student cultural and personal identity interests or lifestyle preferences, and they derive outcomes that are primarily related to the intellectual orientation and social integration of students. The RAP programs provide students with the opportunity to live and study with a small group of students who share their academic interests, and these programs derive outcomes that almost exclusively relate to the academic integration of participants. These findings help to underscore a significant issue for university leaders who are involved in creating non-traditional learning environments for students; that is a variety of educationally purposeful out-of-class activities, including participation in a modestly designed, non-academic living-learning community can affect student learning and growth in many dimensions of their lives including measures of academic achievement, academic and social integration, and in their psycho-social development (Pascarella & Terenzini, 1991). Similar findings prompted Whitt and her colleagues (1999) to suggest that future efforts "to enhance student learning—including outcomes assessment—must focus on learning environments and activities on both sides of the classroom door"(p. 72). It appears that living-learning community programs represent an effective model to enhance student learning outside the classroom, and those programs that include an academic program also may provide participants with more opportunities to integrate their academic and social experiences on campus. While these programs may not be suited for all students, they appear to provide participants with a more seamless learning environment in which to pursue their educational aspirations. Finally, as pointed out in

this study, positive outcomes can be derived from modest living-learning programs of various types. These findings suggest that campuses should develop living-learning communities as one means to expand the educational potential of residence halls and to enhance undergraduate education at large universities.

APPENDIX A

TABLES

Table 1. Learning community dimensions fostered by program structure (RAP programs)

Dimension	Low Focus	Medium Focus	High Focus
Student Collaboration	RAP/Honors	TAP	
Faculty Collaboration	RAP/Honors	TAP	
Curricular Coordination	TAP/RAP/Honors		
Shared Setting TAP/RAP/Honors			
Group Identity TAP/Honors	RAP		
Interactive Pedagogy (varies by instructor)			

Table 2. Learning community dimensions fostered by program structure (RAP and SIRP programs)

Dimension	Not Applicable	Low Focus	Medium Focus	High Focus
Student Collaboration		RAP/Honors All SIRPS		
Faculty Collaboration	All SIRPS	RAP/Honors	TAP	
Curricular Coordination	All SIRPS	RAP/TAP Honors		
Shared Setting RAP/TAP				
Honors				
All SIRPS				
Group Identity TAP		RAP		
Honors				
All SIRPS				
Interactive Pedagogy	All SIRPS			

Table 3. Summary of research studies on student outcomes. Academic Achievement Studies

Variable	Decoster	Duncan & Stoner	Blimling & Hample	Blimling & Paulsen	Kanoy & Bruhn	Edwards & McKelfresh
Control Population	Unknown	Unknown	All conven. res. hall students	Unknown	221	Unknown
Control Sample Pool	Unknown	Unknown	1500	Unknown	55	Unknown
Control Sample	141	84	1223	Unknown	55	261
Response Rate	Unknown	100%	100%	Unknown	100%	100%
Exper. Group Pop.	134	93	1489	22	29	Unknown
Exper. Group Sample	134	93	1489	22	29	81
Response Rate	100%	100%	100%	100%	100%	100%
Pop. Represented	1st yr - Senior	1st yr - Senior	1st yr - Senior	1st yr - Senior (men)	1st year (women)	1st yr Senior
Self-select LLC program?	Yes	Yes	Yes	Yes	Yes	Yes
All Hall?	Yes	Yes	Unknown	Unknown	No	Unknown
Sample Type Experimental	Census	Census	Census	Census	Census	Unknown
Sample Type Control	Random	Random	Random	Random	Random	Random

Table 4. Summary of research studies on student outcomes. Intellectual Development.

Variable	Newcomb, Et. al.	Magnarella	Bennett & Hunter
Control Population	unknown	404	unknown
Control Sample Pool	unknown		unknown
Control Sample	unknown	323	unknown
Response Rate	unknown	79%	unknown
Experimental Group Pop.	Unknown	196	unknown
Experimental Group Sample	unknown	149	unknown
Response Rate	unknown	76%	unknown
Population Represented	1st yr. - Senior	1st yr. - Senior (in one specific (hall)	1st yr. – Senior women)
Self-select	Yes	Yes	Yes
All Hall	Yes	No	unknown
Sample Type Experimental	unknown	Census	unknown
Sample Type Control	unknown	Census	unknown

Table 5. Summary of research studies on student outcomes. Involvement with Faculty and Peers

Variable	Pascarella & Terenzini	Clark, Miser & Roberts	Arminio	Pike	Henry & Schein	Meyer & Schuh
Control Population	493	Unknown	7000	3845 (1st yr. students)	455 (one res. hall)	Unknown
Control Sample Pool	493	Unknown	1000	469	455	Unknown
Control Sample	493	115	893	469	74	Unknown
Response Rate	100%	Unknown	89.3%	Un-known	Covariance sample	Unknown
Exper. Group Population	74	82	91	Un-known	650 (1 residence hall)	18 (qual. study)
Exper. Group Sample	74	82	64	157	74	18
Response Rate	100%	100%	70.3%	Un-known	Co-variance sample	Unknown
Population Represented	First-year	First-year	1st yr. - Senior	First-year	1st yr. - Senior	First-year
Self-select LLC program	Yes	Yes	Yes	Yes	Yes	Yes
All Hall	Unknown	Unknown	Yes	Un-known	Yes	No
Sample Type Exper.	Census	Census	Census	Un-known	Covariance	Unknown
Sample Type Control	Unknown	Unknown	Un-known	Census	Covariance	Not Applicable

Table 6. Survey Response Totals

SIRP Name Group	SIRP Students		Comparison	
	# distributed	# responses	# distributed	# responses
Asian/ Asian-American	45	35	45	36
Harambee: African Heritage	31	27	31	21
Native American	23	18	23	15
International House	86	57	86	82
Nuance: Multicultural	51	41	49	46
2 in 20 Program	34	27	34	18
Wellness: Field	26	20	26	21
Wellness: Greenough	51	45	57	57
Wellness: Gorman	20	18	NA	NA
Wellness: Cashin	12	10	12	9
Total:	363	305/84%	379	298/78%

Table 7. Characteristics of survey respondents

	SIRP Participants	Comparison Group
<u>Race/ethnicity</u>		
White (176)	45.3% (131)	65.7%
Asian/Asian-American (56)	24.2% (70)	20.9%
African/African-American (8)	9.0% (26)	3.0%
Biracial/Multicultural (10)	9.0% (26)	3.7%
Latino/Hispanic (6)	5.2% (15)	2.2%
Native American	2.1% (6)	0% (0)
Other (12)	5.2% (15)	4.5%
<u>Class year</u>		
First-year (50)	30.9% (90)	18.3%
Sophomore (123)	26.1% (76)	45.1%
Junior (63)	23.4% (68)	23.1%
Senior (35)	15.8% (46)	12.8%
5th Year (2)	3.8% (11)	.7%
<u>Sex/gender</u>		
Female (125)	54.6% (159)	45.5%
Male (149)	43.3% (126)	54.2%
Transgender (1)	1.4% (4)	.4%
Intersex (0)	.7% (2)	0%

Table 8. Composite Measures and Reliability Summary

Scale Alpha	Number of Items	Mean (SD)	
Postive Academic Behaviors How often during this academic year have you: a) Asked a question in class/contribute to discussions b) Went to class prepared to answer questions/discuss c) Had to integrate ideas from different sources d) Discussed ideas that courses stimulated (1=never, 2= rarely, 3=sometimes, 4=often, 5=very often)	4	13.8 (3.6)	.81
Academic Work with Peers How often during this academic year have you: a) Studied with students on your floor for a test or exam b) Worked on homework with students on your floor c) Discussed courses or readings with floor-mates (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)	3	6.9 (3.4)	.86
Positive Learning Environment Indicate the extent to which you agree or disagree with each of the following statements. a) Professor/Instructor has inspired me b) Professor interested in my academic development c) Residence life staff interested in my well-being d) Students on my floor discuss intellectual ideas (1=agree strongly, 2=agree somewhat, 3=disagree somewhat, 4=disagree strongly)	4	7.6 (2.5)	.61
Diversity Engagement How often this academic year have you: a) Socialized with students you met on your floor b) Conversations with students of a different race c) Conversations with students with different beliefs (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)	3	9.6 (3.3)	.79

Continued, next page.

Table 8, cont'd.:

Residential Experience How satisfied are you with the following: a) Residence hall experience b) Social Activities offered in residence hall c) Educational activities offered in residence hall d) Overall experience on your floor (1=very satisfied, 2=somewhat satisfied, 3= somewhat dissatisfied, 5=very dissatisfied)	4	9.5 (3.0)	.82
Institutional Commitment Indicate the extent to which you agree or disagree with each of the following statements. a) Know where to go for information b) Feel good about learning experiences at UMass c) Fit in at UMass (1=agree strongly, 2=agree somewhat, 3=disagree somewhat, 4=disagree strongly)	3	5.6 (1.9)	.67
Interpersonal Competence Indicate the extent to which you agree or disagree with each of the following statements. a) Comfort discussing racial issues with others b) Learn about political/social issues with peers c) Challenge others opinions (1=agree strongly, 2=agree somewhat, 3=disagree somewhat, 4=agree strongly)	3	5.5 (1.7)	.57

Table 9. Summary of scale and individual survey variables with significant differences between SIRP participants and comparison group students.

Scale/Survey Item

Positive Academic Behavior Scale

How often have you done each of the following this academic year?

Worked on a paper or project where you had to integrate ideas from various sources (chi square = 9.942, $p = .041$)

Went to class well-prepared to answer questions or engage in discussion (chi square = 11.450, $p = .022$)

Academic Work with Peers Scale

Interaction effect for SIRP by race by class year ($F(3,482) = 2.634$, $p = .049$)

Positive Learning Environment Scale

I have found other students on my floor with whom I can discuss intellectual ideas outside of class. (chi square = 10.632, $p = .014$)

Institutional Commitment Scale

I fit in at UMass. (chi square = 8.531, $p = .036$)

Diversity Engagement Scale ($F(1,482) = 9.064$, $p = .003$)

How often have you done each of the following this academic year?

Had serious conversations with students on your floor of a different race/ethnicity (chi square = 15.146, $p = .004$)

Had serious conversations with students whose beliefs, values, opinions are different from your own (chi square = 14.180, $p = .007$)

Socialized with students you met on your floor (chi square = 11.964, $p = .018$)

Residential Experience Scale

Interaction effect for SIRP by sex and by class year ($F(3,474) = 2.693$, $p = .046$)

Continued, next page.

Table 9, cont'd.:

Individual Survey Variables

Are you involved in an extra-curricular activity? (chi square = 5.205, p = .023)

How difficult has it been for you to get involved in extra-curricular activities? (chi square = 10.82, p = .013)

Do you hold a leadership position in your residence hall? (chi square = 7.203, p = .007)

How many educational programs or organized social events have you attended that Were sponsored by your residence hall? (chi square = 55.700, p = .000)

I have found students on my floor with whom I have things in common. (chi square = 11.414, p = .010)

How certain are you that you will return to UMass next Fall? (chi square = 14. 414, p = .006)

Table 11. Analysis of Variance on Positive Academic Behavior Scale Scores by SIRP, Sex, Race and Class year

Source		df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)	1	1.094		1.094	1.480	.224
Sex (X)*	1	4.450		4.450	6.019	.015
Race (R)*	1	21.653		21.653	29.289	.000
Class year (C)	4	5.375		1.344	1.818	.124
S x X	1	1.085E-02		1.085E-02	.015	.904
S x R	1	.649		.649	.878	.349
X x R	1	.170		.170	.229	.632
S x X x R	1	.341		.342	.461	.498
S x C	4	4.922		1.231	1.664	.157
X x C	4	2.879		.720	.974	.422
S x X x C	3	.469		.156	.212	.888
R x C*	4	8.111		2.028	2.743	.028
S x R x C	3	2.244		.748	1.012	.387
X x R x C	3	.384		.128	.173	.914
S x X x R x C	3	.891		.297	.402	.752
Error		479	354.120	.739		
Total		515	6565.396			

*$p \leq .05$

Table 12. How often during this academic year have you worked on a paper or project where you had to integrate ideas from various sources? SIRP or comparison group cross-tabulation.

		Comparison Group		SIRP	Total
How often during this academic year have you worked on a paper or project where you had to integrate ideas from various sources?	Never	Count	12	23	35
		% response	4.0%	7.8%	5.9%
	Rarely	Count	35	35	70
		%	11.6%	11.9%	11.8%
	Sometimes	Count	94	69	163
		%	31.1%	23.5%	27.4%
	Often	Count	97	85	182
		%	32.1%	29.0%	30.6%
	Very Often	Count	64	81	145
		%	21.2%	27.6%	24.4%
Total		Count	302	293	595
		%	100.0%	100.0%	100.0%

X^2=9.942, p=.041

Table 13. How often during this academic year have you worked on a paper or project where you had to integrate ideas from various sources? SIRP or comparison group cross-tabulation results for female persons of color.

			Comparison Group	SIRP	Total
How often during this academic year have you worked on a paper or project where you had to integrate ideas from various sources?	Never	Count	0	3	3
		%	.0%	4.2%	2.9%
	Rarely	Count	5	10	15
		%	16.1%	14.1%	14.7%
	Sometimes	Count	17	21	38
		%	54.8%	29.6%	37.3%
	Often	Count	8	16	24
		%	25.%	22.5%	23.5%
	Very often	Count	1	21	22
		%	3.2%	29.6%	21.6%
Total		Count	31	71	102
		%	100.0%	100.0%	100.0%

X^2=12.113, p=.017

Table 14. How often during this academic year have you gone to class well-prepared to answer questions or engage in discussion? SIRP and comparison group cross-tabulation.

			Comparison Group	SIRP	Total
How often during this academic year have you gone to class well-prepared to answer questions or engage in discussion?	Never	Count	12	11	23
		%	3.9%	3.8%	3.9%
	Rarely	Count	41	30	71
		%	13.5%	10.2%	11.9%
	Some-Times	Count	96	99	195
		%	31.6%	33.8%	32.7%
	Often	Count	109	81	190
		%	35.9%	27.6%	31.8%
	Very Often	Count	46	72	118
		%	15.1%	24.6%	19.8%
Total		Count	304	293	597
		%	100.0%	100.0%	100.0%

$X^2 = 11.450, p = .022$

Table 15. Analysis of Variance on Academic Work with Peers Scale Scores by SIRP, Sex, Race and Class-year

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)	1	2.742	2.742	2.157	.143
Sex (X)	1	2.563	2.563	2.016	.156
Race (R)	1	.581	.581	.457	.499
ClassYear(C)*	4	18.656	4.664	3.669	.006
S x X	1	2.050	2.050	1.613	.205
S x R	1	1.399	1.399	1.100	.295
X x R	1	.186	.186	.147	.702
S x X x R	1	.707	.707	.556	.456
S x C	4	4.261	1.065	.838	.501
X x C	4	7.374	1.844	1.450	.216
S x X x C	3	3.495	1.165	.917	.433
R x C	4	3.701	.925	.728	.573
S x R x C	3	10.043	3.348	2.634	.049*
X x R x C	3	4.687	1.562	1.229	.299
S x X x R x C	3	4.435	1.478	1.163	.323
Error	482	612.715	1.271		
Total	518	3516.639			

*P $\leq$ .05

Table 16. Dependent Variable: Academic Work with Peers scale. Mean scores for SIRP or comparison group by race and class year.

		Comparison Group	
Race/ethnicity	Class year	Mean	Std. Error
Person of Color	First-year	2.563	.250
	Sophomore	2.117	.231
	Junior	1.672	.291
	Senior	2.083	.304
	5th year	1.167	.797
White/Caucasian	First-year	2.282	.221
	Sophomore	2.689	.119
	Junior	1.848	.185
	Senior	1.727	.262
	5th year	-	
		SIRP	
Person of Color	First-year	2.585	.169
	Sophomore	2.714	.199
	Junior	2.538	.184
	Senior	2.045	.292
	5th year	1.900	.618
White/Caucasian	First-year	2.585	.180
	Sophomore	2.223	.208
	Junior	2.121	.221
	Senior	2.194	.224
	5th year	3.000	1.127

Table 17. Analysis of Variance on Positive Academic Climate Scale Scores by SIRP, Sex, Race, and Class year.

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)	1	.473	.473	1.109	.293
Sex (X)*	1	1.644	1.644	3.857	.050
Race (R)*	1	6.721	6.721	15.771	.000
Class year (C)	4	1.508	.377	.884	.473
S x X	1	2.988E-02	2.988E-02	.070	.791
S x R	1	9.653E-02	9.653E-02	.226	.634
X x R	1	1.378E-02	1.378E-02	.032	.857
S x X x R	1	1.582E-02	1.582E-02	.037	.847
S x C	4	1.059	.265	.621	.647
X x C	4	1.231	.308	.722	.577
S x X x C	3	.598	.199	.468	.705
R x C*	4	5.692	1.423	3.339	.010
S x R x C	3	.812	.271	.635	.593
X x R x C	3	.260	8.663E-02	.203	.894
S x X x R x C	3	1.733	.578	1.355	.256
Error	481	204.992	.426		
Total	517	5991.931			

* $p \leq .05$

Table 18. I have found other student on my floor with whom I can discuss intellectual ideas outside of class.

SIRP or comparison group cross-tabulation.

			Comparison Group	SIRP Group	Total
I have found other students on my floor with whom	Disagree Strongly	Count	32	23	55
		%	10.6%	7.8%	9.2%
I can discuss intellectual ideas outside of class	Disagree Somewhat	Count	57	36	93
		%	18.9%	12.2%	15.6%
	Agree Somewhat	Count	106	98	204
		%	35.1%	33.1%	34.1%
	Agree Strongly	Count	107	139	246
		%	35.4%	47.0%	41.1%
Total		Count	302	296	598
		%	100.0%	100.0%	100.0%

X^2=10.632, p=.014

Table 19. I have found other students on my floor with whom I can discuss intellectual ideas outside of class. SIRP or comparison group cross-tabulation results from White male students.

			Comparison Group	SIRP	Total
I have found other students on my floor with whom I can discuss intellectual ideas outside of class. (White, males)	Disagree strongly	Count	11	4	15
		%	12.2%	8.0%	10.7%
	Disagree somewhat	Count	15	2	17
		%	16.7%	4.0%	12.1%
	Agree somewhat	Count	32	16	48
		%	35.6%	32.0%	34.3%
	Agree Strongly	Count	32	28	60
		%	35.6%	56.0%	42.9%
Total		Count	90	50	140
		%	100.0%	100.0%	100.0%

$X^2 = 8.035$, $p = .045$

Table 20. Analysis of Variance on Institutional Commitment Scale Scores by SIRP, Sex, Race and Class year.

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)	1	.295	.295	.779	.378
Sex (X)*	1	2.463	2.463	6.501	.011
Race (R)*	1	3.156	3.156	8.332	.004
Class Year (C)	4	1.144	.286	.755	.555
S x X	1	.179	.179	.472	.492
S x R	1	6.118E-04	6.118E-04	.002	.968
X x R	1	.332	.332	.877	.350
S x X x R	1	7.787E-02	7.787E-02	.206	.650
S x C	4	.630	.158	.416	.797
X x C	4	2.377	.594	1.569	.181
S x R x C	3	1.378	.459	1.212	.305
R x C	4	2.607	.652	1.721	.144
S x R x C	3	1.537	.512	1.353	.257
X x R x C	3	.142	4.724E-02	.125	.945
S x X x R x C	3	.980	.327	.863	.460
Error	482	182.583	.379		
Total	518	5347.222			

* $p \leq .05$

Table 21. I fit in at UMass. SIRP or comparison group cross-tabulation responses for white females.

			Comparison Group	SIRP	Total
I fit in at UMass	Disagree Strongly	Count	1	3	4
		%	1.2%	3.9%	2.5%
	Disagree Somewhat	Count	4	13	17
		%	4.7%	16.9%	10.5%
	Agree Somewhat	Count	29	26	55
		%	34.1%	33.8%	34.0%
	Agree Strongly	Count	51	35	86
		%	60.0%	45.5%	53.1%
Total		Count	85	77	162
		%	100.0%	100.0%	100.0%

$X^2 = 8.531, p = .036$

Table 22. Analysis of Variance on Diversity Engagement Scale Scores by SIRP, Sex, Race, and Class year

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)*	1	11.000	11.000	9.064	.003
Sex (X)	1	3.423	3.423	2.821	.094
Race (R)*	1	8.553	8.553	7.048	.008
Class Year (C)	4	2.761	.690	.569	.685
S x X	1	.517	.517	.426	.514
S x R	1	2.534	2.534	2.088	.149
X x R	1	1.290	1.290	1.063	.303
S x X x R	1	.125	.125	.103	.749
S x C	4	9.902	2.476	2.040	.088
X x C	4	2.800	.700	.577	.680
S x X x C	3	7.366	2.455	2.023	.110
R x C	4	5.794	1.448	1.194	.313
S x R X C	3	5.212	1.737	1.432	.233
X x R x C	3	4.251	1.417	1.168	.322
S x X x R x C	3	3.499	1.166	.961	.411
Error	482	584.926	1.214		
Total	518	6121.111			

* $p \leq .05$

Table 23. How often during this academic year have you had serious conversations with students on your floor of a different race or ethnicity than your own? SIRP or comparison group cross-tabulations

			Comparison Group	SIRP Group	Total
How often during this academic year have you had serious conversations with students on your floor of a different race or ethnicity than your own? own?	Never	Count	67	44	111
		% response	22.1%	15.1%	18.7%
	Rarely	Count	78	70	148
		% response	25.7%	24.0%	24.9%
	Some-times	Count	67	59	126
		% response	22.1%	20.2%	21.2%
	Often	Count	53	49	102
		% response	17.5%	16.8%	17.1%
	Very Often	Count	38	70	108
		% response	12.5%	24.0%	18.2%
Total		Count	303	292	595
		% response	100.0%	100.0%	100.0%

$X^2 = 15.146, p = .004$

Table 24. How often during this academic year have you had serious conversations with students on your floor of a different race or ethnicity than your own? SIRP or comparison group cross-tabulation responses for female persons of color

			Comparison Group	SIRP	Total
How often have you had serious conversations with students of a different race or ethnicity than your own?	Never	Count	6	3	9
		%	19.4%	4.2%	8.8%
	Rarely	Count	12	18	30
		%	38.7%	25.4%	29.4%
	Some-times	Count	3	19	22
		%	9.7%	26.8%	21.6%
	Often	Count	5	11	16
		%	16.1%	15.5%	15.7%
	Very Often	Count	5	20	25
		%	16.1%	28.2%	24.5%
Total		Count	31	71	102
		%	100.0%	100.0%	100.0%

$X^2 = 11.108, p = .025$

Table 25. How often during this academic year have you had serious conversations with students on your floor of a different race or ethnicity than your own? SIRP or comparison group cross-tabulation White male responses

			Comparison Group	SIRP	Total
How often have you had serious conversations with students of a different race or ethnicity than your own? (White males)	Never	Count	20	10	30
		%	22.7%	20.4%	21.9%
	Rarely	Count	18	13	31
		%	20.5%	26.5%	22.6%
	Some-times	Count	18	10	28
		%	20.5%	20.4%	20.4%
	Often	Count	20	2	22
		%	22.7%	4.1%	16.1%
	Very Often	Count	12	14	26
		%	13.6%	28.5%	19.0%
Total		Count	88	49	137
		%	100.0%	100.0%	100.0%

$X^2 = 11.104,\ p = .025$

Table 26. How often during this academic year have you had serious conversations with students on your floor whose beliefs, opinions or values are different from your own? SIRP or comparison Group Cross-tabulation

			Comparison Group	SIRP Group	Total
How often during this academic year have you had conversations with students on your floor whose beliefs, opinions or values are different from your own?	Never	Count	63	41	104
		% response	20.8%	14.0%	17.5%
	Rarely	Count	73	41	124
		% response	24.1%	17.5%	20.8%
	Some-times	Count	68	80	148
		% response	22.4%	27.4%	24.9%
	Often	Count	60	59	119
		% response	19.8%	20.2%	20.0%
	Very Often	Count	39	61	100
		% response	12.9%	20.9%	16.8%
Total		Count	303	292	595
		% response	100.0%	100.0%	100.0%

$X^2 = 14.180, p = .007$

Table 27. How often during this academic year have you had serious conversations with students on your floor whose beliefs, opinions or values are different from your own? SIRP or comparison group cross-tabulation male students of color responses

			Comparison Group	SIRP	Total
How often have you had serious conversations with students whose beliefs, opinions or values are different from your own? (male students of color)	Never	Count	14	17	31
		%	29.2%	25.4%	27.0%
	Rarely	Count	17	9	26
		%	35.4%	13.4%	22.6%
	Some-times	Count	9	19	28
		%	18.8%	28.4%	24.3%
	Often	Count	6	14	20
		%	12.5%	20.9%	17.4%
	Very Often	Count	2	8	10
		%	4.2%	11.9%	8.7%
Total		Count	48	71	102
		%	100.0%	100.0%	100.0%

$X^2 = 10.264,\ p = .036$

Table 28. How often during this academic year have you socialized with students you met on you floor? SIRP or comparison group cross-tabulation

			Comparison Group	SIRP	Total
How often during this academic year have you socialized with students you met on your floor?	Never	Count	22	8	30
		% response	7.2%	2.7%	5.0%
	Rarely	Count	46	28	74
		% response	15.1%	9.6%	12.4%
	Some-Times	Count	65	74	139
		% response	21.4%	25.3%	23.3%
	Often	Count	49	57	106
		% response	16.1%	19.5%	17.8%
	Very Often	Count	122	126	248
		% response	40.1%	43.0%	41.5%
Total		Count	304	293	597
		% response	100.0%	100.0%	100.0%

$X^2 = 11.964$, p =.018

Table 29. How often during this academic year have you socialized with students you met on your floor? SIRP or comparison group cross-tabulation responses for junior year students

			Comparison Group	SIRP	Total
How often have you socialized with students you met on your floor? (junior year students)	Never	Count	8	0	8
		%	12.7%	.0%	6.1%
	Rarely	Count	10	4	14
		%	15.9%	5.9%	10.7%
	Some-times	Count	18	24	42
		%	28.6%	35.3%	32.1%
	Often	Count	9	14	23
		%	14.3%	20.6%	17.6%
	Very Often	Count	18	26	44
		%	28.6%	38.2%	33.6%
Total		Count	63	68	131
		%	100.0%	100.0%	100.0%

$X^2 = 13.799, p = .008$

Table 30. Analysis of Variance on Interpersonal Competence Scale Scores by SIRP, Sex, Race, and Class Year

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)	1	8.800E-02	8.800E-02	.260	.610
Sex (X)	1	.812	.812	2.398	.122
Race (R)*	1	3.281	3.281	9.686	.002
Class Year (C)	4	1.593	.398	1.175	.321
S x X	1	.748	.748	2.208	.138
S x R	1	1.141E-02	1.141E-02	.034	.854
X x R	1	.372	.372	1.098	.295
S x X x R	1	1.305E-02	1.305E-02	.039	.844
S x C	4	.793	.198	.585	.674
X x C	4	.858	.215	.633	.639
S x X x C	3	.761	.254	.749	.523
R x C	4	3.216	.804	2.374	.051
S x R x C	3	.132	4.416E-02	.130	.942
X x R x C	3	1.358	.453	1.137	.262
S x X x R x C	3	.492	.164	.484	.694
Error	482	163.274	.339		
Total	518	5336.222			

* $p \leq .05$

Table 31. Analysis of Variance on Residential Experience Scale Scores by SIRP, Sex, Race, and Class year

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP (S)	1	1.127E-02	1.127E	.026	.871
Sex (X)	1	2.045	2.045	4.776	.029
Race (R)*	1	2.838	2.838	6.626	.010
Class Year (C)	4	3.115	.779	1.819	.124
S x X	1	.346	.346	.809	.369
S x R	1	5.802E-02	5.802E-02	.135	.713
X x R	1	4.520E-04	4.520E-04	.001	.974
S x X x R	1	.276	.276	.646	.422
S x C	4	1.428	.357	.834	.504
X x C	4	2.035	.509	1.188	.315
S x X x C*	3	3.459	1.153	2.693	.046
R x C	4	2.734	.684	1.596	.174
S x R x C	3	.415	.138	.323	.809
X x R x C	3	.486	.162	.378	.769
S x X x R x C	3	1.511	.504	1.176	.318
Error	474	202.987	.428		
Total	510	5037.396			

* $p \leq .05$

Table 32. Dependent Variable: Residential Experience scale SIRP or Comparison Group mean score by sex and class-year

Sex	Class year	Mean	Std. Error
	Comparison Group		
Female	First-year	2.915	.152
	Sophomore	3.136	.111
	Junior	3.045	.151
	Senior	3.027	.182
	5th year	-	
Male	First-year	2.780	.131
	Sophomore	3.023	.105
	Junior	3.025	.134
	Senior	3.274	.152
	5th year	3.000	.463
	SIRP		
Female	First-year	3.105	.099
	Sophomore	3.047	.100
	Junior	3.160	.110
	Senior	3.353	.143
	5th year	4.000	.654
Male	First-year	3.045	.105
	Sophomore	3.232	.134
	Junior	3.082	.127
	Senior	2.810	.152
	5th year	3.275	.358

Table 33. Analysis of variance on Grade Point Average (GPA) by SIRP, Sex, Race and Class-year

Source	df	Sum of Squares	Mean Square	F	Sig.
SIRP	1	6257.442	6257.442	1.957	.163
Sex (X)	1	11130.348	11130.348	3.480	.063
Race (R)	1	1972.218	1972.218	.617	.433
Class year (C)	4	15662.754	15662.754	1.224	.300
S x X	1	1569.864	1569.864	.491	.484
S x R	1	7982.835	7982.835	2.496	.115
X x R	1	7982.003	7982.003	2.496	.115
S x X x R	1	344.472	344.472	.108	.743
S x C	4	13405.931	3351.483	1.048	.382
X x C	4	5312.685	1328.171	.415	.798
S x X x C	3	6203.853	2067.951	.647	.585
R x C	4	9104.483	2276.121	.712	.584
S x R x C	3	10684.785	3561.595	1.114	.343
X x R x C	3	3044.455	1014.818	.317	.813
S x X x R x C	3	12647.622	4215.874	1.318	.268
Error	453	1448722.521	3198.063		
Total	489	48977877.000			

Table 34. Are you involved in an extra-curricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.)? SIRP or comparison group cross-tabulation

			Comparison Group	SIRP Group	Total
Are you involved in an extra-curricular (e.g., choral group, intramural athletics student cultural organization, etc.?	Yes	Count	162	183	345
		% response	53.6%	62.9%	58.2%
	No	Count	140	108	248
		% response	46.4%	37.1%	41.8%
Total		Count	302	291	593
		% response	100.0%	100.0%	100.0%

$X^2 = 5.205, p = .023$

Table 35. Are you involved in an extracurricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.) SIRP or comparison group cross-tabulation responses for female students of color

			Comparison Group	SIRP	Total
Are you involved in an extra-curricular activity?	Yes	Count	13	51	64
		%	44.8%	70.8%	63.4%
	No	Count	16	21	37
		%	55.2%	29.2%	36.6%
Total		Count	29	72	101
		%	100.0%	100.0%	100.0%

$X^2 = 6.023, p = .014$

Table 36. Are you involved in an extracurricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.) ? SIRP or comparison group cross-tabulations for junior year students

			Comparison Group	SIRP	Total
Are you involved in an extra-curricular activity?	Yes	Count	29	44	73
		%	47.5%	67.7%	57.9%
	No	Count	32	21	53
		%	52.5%	32.3%	42.1%
Total		Count	61	65	126
		%	100.0%	100.0%	100.0%

$X^2 = 5.244,\ p = .022$

Table 37. How difficult has it been for you to get involved in extracurricular activities at UMass? SIRP or comparison group cross-tabulation

			Comparison Group	SIRP	Total
How difficult has it been for you to get involved in extra-curricular activities at UMass?	Very difficult	Count	6	15	21
		%	2.0%	5.3%	3.6%
	Somewhat difficult	Count	96	63	159
		%	32.3%	22.1%	27.3%
	Not too Difficult	Count	117	124	241
		%	39.4%	43.5%	41.4%
	Not at all Difficult	Count	78	83	161
		%	26.3%	29.1%	27.7%
Total		Count	297	285	582
		%	100.0%	100.0%	100.0%

$X^2 = 10.822, p = .013$

Table 38. How difficult has it been for you to get involved in extra-curricular activities here at UMass? SIRP or comparison group crosstabulation results for junior year students

			Comparison Group	SIRP	Total
How difficult has it been for you to get involved in extra-curricular activities at UMass? (junior-year students)	Very difficult	Count	0	5	5
		%	.0%	7.7%	4.0%
	Some-what difficult	Count	25	13	38
		%	42.4%	20.0%	30.6%
	Not too difficult	Count	21	32	53
		%	35.6%	49.2%	42.7%
	Not at Difficult	Count	13	15	28
		%	22.0%	23.1%	22.6%
Total		Count	59	65	124
		%	100.0%	100.0%	100.0%

$X^2 = 10.951, p = .012$

Table 39. How difficult has it been for you to get involved in extracurricular activities here at UMass? SIRP or comparison group crosstabulation responses for White males

			Comparison Group	SIRP	Total
How difficult has it been for you to get involved in extra-curri-lar activities here at UMass? (White males)	Very difficult	Count	2	4	6
		%	2.3%	8.2%	4.4%
	Some-What difficult	Count	25	5	30
		%	28.7%	10.2%	22.1%
	Not too difficult	Count	30	23	53
		%	34.5%	46.9%	39.0%
	Not at all Difficult	Count	30	17	47
		%	34.5%	34.7%	34.6%
Total		Count	87	49	134
		%	100.0%	100.0%	100.0%

$X^2 = 8.572, p = .036$

Table 40. Do you hold a leadership position (such as advisory board or house council) in your residence hall? SIRP or comparison group cross-tabulation

			Comparison Group	SIRP	Total
Do you hold a leadership position (such as advisory board or house council) in your residence hall?	Yes	Count	26	46	72
		% response	9.0%	16.5%	12.7%
	No	Count	262	232	494
		% response	91.0%	83.5%	87.3%
Total			288	278	566
			100.0%	100.0%	100.0%

$X^2 = 7.203, p = .007$

Table 41. Do you hold a leadership position (such as advisory board or house council) in your residence hall? SIRP or comparison group cross-tabulation response for first-year students

			Comparison Group	SIRP	Total
Do you hold a leadership position in your residence hall? (first-year students)	Yes	Count	1	13	14
		%	2.2%	15.9%	10.9%
	No	Count	45	69	114
		%	97.8%	84.1%	89.1%
Total		Count	46	82	128
		%	100.0%	100.0%	
100.0%					

$X^2 = 5.661, p = .017$

Table 42. Do you hold a leadership position (such as advisory board or house council) in your residence hall? SIRP or comparison group cross-tabulation response for female and male students of color

			Female students of color		
			Comparison Group	SIRP	Total
Do you hold a leadership position position in your residence hall?	Yes	Count	1	15	16
		%	3.3%	22.4%	16.5%
	No	Count	29	52	81
		%	96.7%	77.6%	83.5%
Total		Count	30	67	97
		%	100.0%	100.0%	100.0%
			Male students of color		
	Yes	Count	0	12	12
		%	.0%	19.7%	11.1%
	No	Count	47	49	96
		%	100.0%	80.3%	88.9%
Total		Count	47	61	108
		%	100.0%	100.0%	100.0%

Table 43. How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor? SIRP or comparison group cross-tabulation

			Comparison Group	SIRP Group	Total
How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor?	None	Count	100	42	142
		% responses	33.2%	14.6%	24.1%
	One or two	Count	140	110	250
		% responses	46.5%	38.2%	42.4%
	Three Or four	Count	42	90	132
		% responses	14.0%	31.3%	22.4%
	Five or More	Count	19	46	65
		% responses	6.3%	16.0%	11.0%
Total		Count	301	288	589
		% responses	100.0%	100.0%	100.0%

$X^2 = 55.00, p = .000$

Table 44. How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor? SIRP or comparison group cross-tabulation response for female and male students of color

			Female students of color*		
			Comparison Group	SIRP	Total
How many educational programs have you attended this semester?	None	Count	13	7	20
		%	43.3%	9.9%	19.8%
	One or Two	Count	14	23	37
		%	46.7%	32.4%	36.6%
	Three or Four	Count	2	31	33
		%	6.7%	43.7%	32.7%
	Five or More	Count	1	10	11
		%	3.3%	14.1%	10.9%
Total		Count	30	71	101
		%	100.0%	100.0%	100.0%
			Male students of color**		
	None	Count	19	4	21
		%	39.6%	6.3%	20.7%
	One or Two	Count	21	19	40
		%	43.8%	30.2%	36.0%
	Three or Four	Count	6	25	31
		%	12.5%	39.7%	27.9%
	Five or More	Count	2	15	17
		%	4.2%	23.8%	15.3%
Total		Count	48	63	111
		%	100.0%	100.0%	100.0%

* $X^2 = 24.178,\ p = .000$
** $X^2 = 29.990, p = .000$

Table 45. How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor? SIRP or comparison group cross-tabulation response for first-year and sophomore students

			First-year students*		
			Comparison Group	SIRP	Total
How many educational programs or social events have you attended this semester?	None	Count	17	13	30
		%	34.0%	14.9%	21.9%
	One or Two	Count	24	31	55
		%	48.0%	35.6%	40.1%
	Three or Four	Count	8	27	35
		%	16.0%	31.0%	25.5%
	Five or More	Count	1	16	17
		%	2.0%	18.4%	12.4%
Total		Count	50	87	137
		%	100.0%	100.0%	100.0%
			Sophomore students**		
	None	Count	38	15	53
		%	31.1%	20.0%	26.9%
	One or Two	Count	62	25	87
		%	50.8%	33.3%	44.2%
	Three or Four	Count	13	28	41
		%	10.7%	37.3%	20.8%
	Five or More	Count	9	7	16
		%	7.4%	9.3%	8.1%
Total		Count	122	75	197
		%	100.0%	100.0%	100.0%

* $X^2 = 16.160$, $p = .001$
** $X^2 = 21.463$, $p = .000$

Table 46. I have found students on my floor with whom I have things in common. SIRP or comparison group cross-tabulation

			Comparison Group	SIRP Group	Total
Total I have found students on my floor with whom I have things in common	Agree Strongly	Count	143	158	301
		% response	47.2%	53.4%	50.3%
	Agree Somewhat	Count	94	104	198
		% response	31.0%	35.1%	33.1%
	Disagree Somewhat	Count	43	22	65
		% response	14.2%	7.4%	10.9%
	Disagree Strongly	Count	23	12	35
		% response	7.6%	4.1%	5.8%
Total		Count	303	296	599
		% response	100.0%	100.0%	100.0%

$X^2 = 11.414,\ p = .010$

Table 47. I have found students on my floor with whom I have things in common. SIRP or comparison group cross-tabulation response for students of color

			Comparison Group	SIRP	Total
I have found students on my floor with whom I have things in common.	Agree strongly	Count	28	71	99
		%	35.4%	50.0%	44.8%
	Agree Somewhat	Count	33	57	90
		%	41.8%	40.1%	40.7%
	Disagree Somewhat	Count	12	11	23
		%	15.2%	7.7%	10.4%
	Disagree Strongly	Count	6	3	9
		%	7.6%	2.1%	4.1%
Total		Count	79	142	221
		%	100.0%	100.0%	100.0%

$X^2 = 8.883$. $p = .031$

Table 48. I have found students on my floor with whom I have things in common. SIRP or comparison group cross-tabulation of responses for junior-year students

			Comparison Group	SIRP	Total
I have found student on my floor with whom I have things in common.	Agree strongly	Count	23	37	60
		%	36.5%	54.4%	45.8%
	Agree Somewhat	Count	22	24	46
		%	34.9%	35.3%	35.1%
	Disagree Somewhat	Count	11	4	15
		%	17.5%	5.9%	11.5%
	Disagree Strongly	Count	7	3	10
		%	11.1%	4.4%	7.6%
Total		Count	63	68	131
		%	100.0%	100.0%	100.0%

$X^2 = 8.041, p = .045$

Table 49. How certain are you that you will return to UMass next Fall? SIRP or comparison group cross-tabulation

			Comparison Group	SIRP Group	Total
How certain are you that you will return to UMass next Fall	Completely certain will	Count	208	173	381
		% response	68.9%	59.2%	64.1%
	Fairly certain will	Count	47	39	86
		% response	15.6%	13.4%	14.5%
	Not sure	Count	16	26	42
		% response	5.3%	8.9%	7.1%
	Fairly certain not return	Count	8	7	15
		% response	2.6%	2.4%	2.5%
	Completely certain will not	Count	23	47	70
		% response	7.6%	16.1%	11.8%
Total		Count	302	292	594
		% response	100.0%	100.0%	100.0%

$X^2 = 14.471,\ p = .006$

Table 50. How certain are you that you will return to UMass next Fall? SIRP or comparison group cross-tabulation excluding seniors and 5th year students

			Comparison Group	SIRP	Total
How certain are you that you will return to UMass next Fall? (White students)	Completely Certain return	Count	176	151	327
		%	74.6%	65.7%	70.2%
	Fairly certain return	Count	38	36	74
		%	16.1%	15.7%	15.9%
	Not sure	Count	13	22	35
		%	5.5%	9.6%	7.5%
	Fairly Certain not Return	Count	4	5	9
		%	1.7%	2.2%	1.9%
	Completely Certain not Return	Count	5	16	21
		%	2.1%	7.0%	4.5%
Total		Count	236	230	466
		%	100.0%	100.0%	100.0%

$X^2 = 10.077,\ p = .039$

Table 51. How certain are you that you will return to UMass next Fall by which of the following best describes the extent to which SIRP met expectations. SIRP cross-tabulation

			Which of the following best describes the extent to which your SIRP met your expectations?					
			ALL	MANY	SOME	FEW	NONE	TOTAL
How certain are you that you will return to UMass next Fall?	Completely certain w/return	Count	41	52	36	8	2	139
		%	80.4%	69.3%	67.9%	38.1%	33.3%	67.5%
	Fairly certain w/return	Count	2	12	7	7	2	30
		%	3.9%	16.0%	13.2%	33.3%	33.3%	14.5%
	Not sure	Count	2	4	6	5	2	19
		%	3.9%	5.3%	11.3%	23.8%	33.3%	9.2%
	Fairly Certain W/not	Count	2	-	1	1	-	4
		%	3.9%	0%	1.9%	4.8%	0%	1.9%
	Completely Certain W/not	Count	4	7	3	-	-	14
		%	7.8%	9.3%	5.7%	0%	0%	6.8%
		Count	51	75	53	21	6	206
		%	100%	100%	100%	100%	100%	100%

$X^2 = 33.550,\ p = .006$

Table 52. Summary of Scale and GPA mean scores by SIRP

	Inter-national	NUANCE	Asian-Amer.	2 in 20	Nat. Haram	Green. Amer.	Field Well.	Gorman Well.	Cashin Well.	Well
Positive Academ. Behavior	3.13	3.44	2.94	3.90	3.86	3.52	3.67	3.87	3.59	3.72
Acad. Work W/Peers	2.23	2.60	2.62	2.20	3.09	2.18	2.00	2.03	2.53	2.40
Positive Acad. Climate	3.30	3.28	2.99	3.46	3.47	3.44	3.47	3.67	3.34	3.85
Diversity Engage-Ment	3.20	3.66	3.02	3.54	3.90	3.72	3.37	3.03	2.97	3.70
Residen-Tial Exp.	2.95	3.01	2.90	3.17	3.33	3.26	3.12	3.22	2.93	3.65
Institu-Tional Commit.	3.17	2.97	2.98	3.02	3.35	3.07	3.25	3.03	2.88	3.50
Interper-Sonal Comp.	3.07	3.15	2.78	3.28	3.24	3.29	3.19	3.31	3.14	3.50
GPA Aver.	3.41	3.12	2.69	3.15	3.01	2.84	3.21	3.57	3.32	3.45

Table 53. Summary of findings of significant difference among SIRP Programs

Academic Work with Peers Scale (F(9, 285) = 2.194, p = .005)

SIRP with lower mean score	SIRP with higher mean score	Mean difference	Sig.
Greenough Wellness	Harambee	1.091	p = .003
International Program	Harambee	.8624	p = .038
Field Wellness	Harambee	1.065	p = .044

Positive Academic Behavior Scale (F(9, 283) = 4.061, p = .000)

SIRP with lower mean score	SIRP with higher mean score	Mean difference	Sig.
International Program	2 in 20	.7695	p = .015
International Program	Harambee	.7275	p = .033
Asian/Asian-American	2 in 20	.9662	p = .002
Asian/Asian-American	Field Wellness	.9338	p = .013
Asian/Asian-American	Harambee	.9242	p = .005
Asian/Asian-American	Greenough Wellness	.7385	p = .017

Positive Academic Climate Scale (F(9, 286) = 2.894, p = .003)

SIRP with lower mean score	SIRP with higher mean score	Mean difference	Sign.
Asian/Asian-American	Field Wellness	.6845	p = .007
Asian/Asian-American	Cashin Wellness	.8595	p = .009
Asian/Asian-American	Greenough Wellness	.4817	p = .035

Diversity Engagement Scale (F(9, 285) = 2.685, p = .005)

SIRP with lower mean score	SIRP with higher mean score	Mean difference	Sig.
Asian/Asian-American	Harambee	.0039	p = .003

Interpersonal Competence Scale (F(9, 286) = 2.477, p = .010)

SIRP with lower mean score	SIRP with higher mean score	Mean difference	Sig.
Asian/Asian-American	2 in 20	.5030	p = .037
Asian/Asian-American	Cashin Wellness	.7190	p = .030
Asian/Asian-American	Field Wellness	.5357	p = .048

GPA Score (F(9, 261) = 5.852, p = .000)

SIRP with lower mean score	SIRP with higher mean score	Mean difference	Sig.
Asian/Asian-American	Greenough Wellness	.5204	p = .005
Asian/Asian-American	International Program	.7245	p = .000
Asian/Asian-American	Cashin Wellness	.7568	p = .016
Asian/Asian-American	Field Wellness	.8796	p = .000
Native American	International Program	.5788	p = .010
Native American	Field Wellness	.7339	p = .005
Harambee	Field Wellness	.5639	p = .046

Table 54. RAP and SIRP scale variable and alpha reliability summary

Academic Work with Peers (RAP scale, alpha reliability = .7855)
How many times have you worked on homework with another student or students?; How many times have you studied with another student or students for a test or exam?; How many times have you studied or worked on course work with other students who live in your residence hall? (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)

Academic Work with Peers (SIRP scale, alpha reliability = .8671)
How many times have you worked on homework with another student or students?; How many times have you studied with another student of students for a test or exam?; How many times have you discussed ideas from your courses or readings with students on your floor? (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)

Positive Academic Behaviors (RAP scale, alpha reliability = .5919)
This academic year how often have you come to class well prepared to answer questions or engage in discussions? (1=never, 5=very often); How often have you asked questions in class or contributed to class discussions? (1=never, 5=very often); How often have you discussed ideas from your classes with others outside of class? (1=never, 5=very often); I am having trouble figuring out how to succeed academically at UMass. (1=agree strongly, 4=disagree strongly); I am confident that I can succeed academically at UMass. (1=very confident, 4=not at all confident)

Positive Academic Behaviors (SIRP scale, alpha reliability = .8269)
This academic year how often have you come to class well prepared to answer questions or engage in discussions?; How often have you asked questions in class or contributed to class discussions?; How often have you discussed ideas from your classes with other outside of class?; How often have you worked on a paper or project where you had to integrate ideas from various sources? (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)

Positive Learning Environment (RAP scale, alpha reliability = .6957)
A lot of what I have learned in my courses at UMass can be applied to the real world; Being at UMass has helped me figure out how to develop my intellectual abilities; I know at least one professor at UMass who is interested in my academic development; I feel very good about my learning experiences at UMass so far; I have been intellectually stimulated this semester; At least one instructor at UMass has inspired me to do better than I thought I could. (1=disagree strongly, 4=agree strongly)

Positive Learning Environment (SIRP scale, alpha reliability = . 6111)
I know at least one professor at UMass who is interested in my academic development; At least one instructor at UMass has inspired me to do better than I thought I could; I know at least one residence life staff member who is interested in my well-being; I have found other students on my floor with whom I can discuss intellectual ideas outside of class. (1=agree strongly, 2=agree somewhat, 3=disagee somewhat, 4=disagree strongly)

Level of Institutional Commitment (RAP scale, alpha reliability = .8027)
During this semester to what extent have you felt a sense of community at UMass? (1=to a very little extent, 5=to a very great extent); How certain are you that you will return to UMass next fall? (1=completely certain not to return, 5=completely certain to return); Do you think you made the right decision in choosing to attend UMass? (1=definitely work decision, 5=definitely right decision); I fit in at UMass. (1=strongly disagree, 4=strongly agree); How satisfied are you with your overall experience at UMass so far? (1=very satisfied, 4=very dissatisfied).

Level of Institutional Commitment (SIRP scale, alpha reliability = .6718)
I fit in at UMass. (1=agree strongly, 4=disagree strongly); How satisfied are you with your overall UMass experience? (1=very satisfied, 4=very dissatisfied); I know where to go for help when I need information about UMass. (1=agree strongly, 4=disagree strongly)

Table 55. Comparison of common variable response means between SIRP and RAP participants

	RAP (N=477)	RAP Comp. (N=328)	SIRP (N=305)	SIRP Comp. (N=298)
Overall Experience				
Institutional Commitment Scale	3.49*	3.39	3.16	3.13
Social Integration Variables				
How often have you had conversations with student of a race or ethnicity other than your own? (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)	3.50	3.65*	(X^2 = 15.146, p = .004)**	
How often have you had serious conversations with students whose beliefs, opinions or values are very different from your own? (1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)	3.39	3.32	(X^2 = 14.180, p = .007)**	
How difficult has it been for you to get involved in extra-curricular activities here at UMass? (1=very difficult, 2=somewhat difficult 3=not too difficult, 4=not at all difficult)	3.21	3.17	(X^2 = 10.82, p = .013)*	
Academic Integration Variables				
Academic Work with Peers Scale	3.24***	2.82	2.35	2.06
Positive Academic Behaviors Scale	3.55***	3.38	3.61	3.30
On average, how many hours per week do you spend studying or doing homework? (response scale=actual number of hours reported)	12.95***	10.90	14.60	13.53
Positive Academic Climate Scale	2.72***	2.58	3.41	3.22
How often have you worked on a Paper or project where you had to Integrate ideas from various sources? (1=never, 2=rarely, 3=sometimes, 4= often, 5=very often)	3.21	2.90	(X^2 = 9.942, p = .041)*	
GPA Scores(RAP = Honors LLC)	3.95*	3.27	3.17	3.06

* $p \leq .05$ difference between RAP and RAP comparison group or SIRP and SIRP comparison group

** $p \leq .01$ difference between RAP and RAP comparison group or SIRP and SIRP comparison group

*** $p \leq .001$ difference between RAP and RAP comparison group or SIRP and SIRP comparison group

Table 56. Summary of outcomes associated with participation in all living-learning communities at the university

Scales Outcome	SIRP Outcome	RAP
Academic Work with Peers Scale	No	Yes
Positive Academic Behaviors Scale	No	Yes
Positive Learning Environment Scale	No	Yes
Institutional Commitment Scale	No	Yes
Diversity Engagement Scale	Yes	No
Scale Interaction Effects		
Academic Work with Peers Scale (SIRP x Race x Sex interaction effect)	Yes	Unknown
Residential Experience Scale (SIRP x Sex x Class year interaction effect)	Yes	Unknown
Individual Variables		
GPA Achievement	No	Yes
Hours per week spent studying or Doing homework	No	Yes
Worked on a paper or project/integrate Ideas from various sources	Yes	Yes
Number of times worked on group projects	Not Applicable	Yes
Went to class well-prepared to answer Questions or engage in discussion	Yes	Yes*
Found other students on my floor with whom I Unknown Discuss intellectual ideas outside of class	Yes	

Continued, next page.

Table 56, cont'd.:

I fit in at UMass	Yes**	Yes*
Had serious conversations with students on floor of a different race/ethnicity	Yes*	Yes**
Had serious conversations with students Whose Beliefs, values, opinions are different	Yes*	No
Socialized with students met on floor	Yes*	Unknown
Involved in extracurricular activity	Yes	Unknown
Difficulty with getting involved in	Yes	No
Hold a leadership position in residence hall	Yes	Unknown
How many educational programs/events attended in residence hall	Yes	Unknown
Found students on floor with things in common	Yes	Unknown
Certain to return to Umass next Fall	Yes**	Yes*

*Indicates variable included within scale measure.
**Significant difference between LLC and comparison group students. Comparison group achieved a more favorable score. In other cases, "Yes" indicates living-learning community has favorable score.

APPENDIX B

RESIDENTIAL ACADEMIC PROGRAM SURVEY

SURVEY OF LEARNING COMMUNITY MEMBERS
Office of Academic Planning and Assessment

We are surveying all students in learning communities on campus (including RAPs and TAPs) to learn more about your experiences at UMass. Thanks for taking the time to provide us with this feedback. Be assured your responses will remain confidential.

INSTRUCTIONS: Using a No. 2 pencil or a Black or Dark Blue BALLPOINT pen, fill in the oval completely to indicate your response. Please try not to make stray marks on this form.

Correct mark ● Incorrect mark ✓ ○ ✗ ◑ —

1 Are you involved in an extra-curricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.) on a regular basis?

- Yes
- No

How difficult has it been for you to get involved in extra-curricular activities here at UMass?

2
- Very difficult
- Somewhat difficult
- Not too difficult
- Not at all difficult

3 How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor?

- None
- One or two
- Three or four
- Five or more

4 Do you hold a leadership position (such as holding an office or serving on a committee) in your residence hall?

- Yes
- No

How often have you done each of the following this year?	Never	Rarely	Sometimes	Often	Very Often
5 Socialized with students you met in class					
6 Studied with another student or students for a test or exam	Response Set Diff				
7 Participated in a group project for class	Response Set Diff				
8 Worked on homework with another student or students	Response Set Diff				
9 Asked questions in class or contributed to class discussions					
10 Had discussions with friends about ideas that your courses stimulated					
11 Went to class well-prepared to answer questions or engage in discussion					
12 Worked on a paper or project where you had to integrate ideas from various sources					
13 Had serious conversations with students of a different race or ethnicity than your own					
14 Had serious conversations with students whose beliefs, opinions or values are very different from yours					
15 Discussed ideas from your courses or readings with people outside of your classes, such as friends, family members, or co-workers					

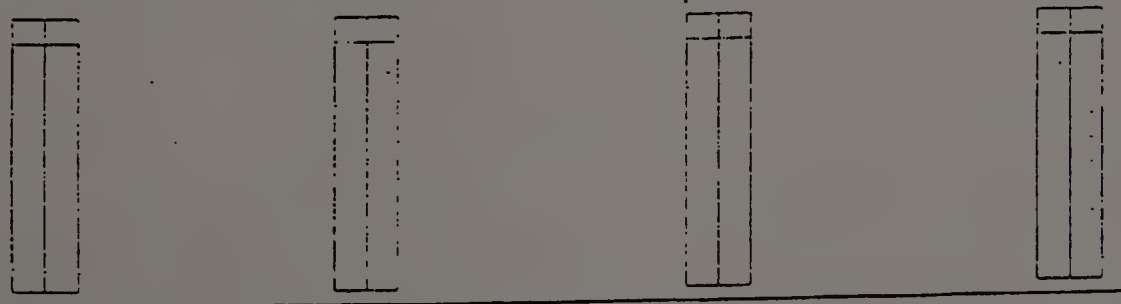
THIS SEMESTER, how many times have you engaged in each of the following activities with a professor? By professor, we mean a lead instructor for a course, not a teaching assistant running a lab or discussion section.

16 Discussed academic or intellectual issues with a professor outside of class?

17 Talked with a professor about your performance on tests or assignments?

18 Discussed your career plans and opportunities with a professor?

19 Talked with or socialized informally with a professor about topics not related to class?



OVER>>>>

20 On average, how many hours per week do you spend studying or doing homework?

21 This semester, how many times have you studied or worked on course work with other students who live in your residence hall?

- Never
- Once or twice
- Three to four times
- Five to ten times
- Eleven or more times

Response Cat Diff.

Please indicate the extent to which you agree or disagree with each of the following statements.

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
22 I have found other students with whom I can discuss intellectual ideas outside of class.				
23 A lot of what I have learned in my courses at UMass can be applied to the real world.				
24 I am having trouble figuring out how to succeed academically at UMass.				
25 Being at UMass has helped me figure out how to develop my intellectual abilities.				
26 I know at least one professor at UMass who is interested in my academic development.				
27 I feel very good about my learning experience at UMass so far.				
28 I have been intellectually stimulated this semester.				
29 At least one professor at UMass has inspired me to do better than I thought I could.				
30 I know where to go for help when I need to access information about UMass.				

31 How confident are you that you can succeed academically at UMass Amherst?

- Very confident
- Somewhat confident
- Not too confident
- Not at all confident

32 To what extent have you felt a sense of community at UMass?

- To a very great extent
- To a great extent
- To some extent
- To a little extent
- To a very little extent

33 How certain are you that you will return to UMass next Fall?

- I am completely certain I will return
- I am fairly certain I will return
- I am not sure
- I am fairly certain I will not return
- I am completely certain I will not return

Please indicate which Learning Community, RAP, or TAP you are in (e.g., Psych TAP, Baker, Orchard Hill, etc.). _____

How satisfied are you with each of the following:

	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
34 Your residence hall experience?				
35 Your roommate?				
36 Social activities offered in your residence hall?				
37 The courses you have taken sponsored by your learning community?				
38 Academic advising you have received through your learning community?				
39 Your overall experience in your learning community?				
40 Your overall UMass experience?				

How likely would you be to recommend your learning community program to other students?

41 Very likely | Somewhat likely | Somewhat unlikely | Very unlikely

Please explain your answer to this question: _____

_____

_____

Which of the following best describes your race or ethnicity?

- Biracial or Multi-racial
- African-American, or Black
- Asian-American, or Pacific Islander
- Cape Verdean
- Latino, or Hispanic, or Chicano
- Native-American, or N. or S. American Indian, or Alaskan Native
- White, or Caucasian
- Other

What is your residential area?

- Northeast
- Sylvan
- Orchard Hill
- Central
- Southwest
- Other

Your sex:

- Female
- Male

Your major status:

- Undeclared
- Pre-major
- Declared

APPENDIX C

SPECIAL INTEREST RESIDENTIAL PROGRAM SURVEY

RESIDENT STUDENT SURVEY
Department of Residence Life

We are surveying students to learn about your experiences at UMass. Thanks for taking the time to provide us with this feedback. Be assured that your responses will remain confidential.

INSTRUCTIONS: Using a No. 2 pencil or a Black or Dark Blue BALLPOINT pen, fill in the oval completely to indicate your response. Please try not to make stray marks on this form.

Correct mark ○ ● ○ ○ ○ Incorrect mark ✓ ⊘ ✗ ⊖ ◕

Are you involved in an extra-curricular activity (e.g., choral group, intramural athletics, student cultural organization, etc.)?

- ○ Yes
- ○ No

How difficult has it been for you to get involved in extra-curricular activities here at UMass?

- ○ Very difficult
- ○ Somewhat difficult
- ○ Not too difficult
- ○ Not at all difficult

How many educational programs or organized social events have you attended this semester that were sponsored by your residence hall or floor?

- ○ None
- ○ One or two
- ○ Three or four
- ○ Five or more

Do you hold a leadership position (such as advisory board or house council) in your residence hall?

- ○ Yes
- ○ No

How satisfied are you with each of the following?

	Very Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Very Satisfied
Your roommate?	○	○	○	○
Your residence hall experience?	○	○	○	○
Social activities offered in your residence hall?	○	○	○	○
Educational activities offered in your residence hall?	○	○	○	○
Your overall experience living on your floor?	○	○	○	○
Your overall UMass experience?	○	○	○	○

Please indicate the extent to which you agree or disagree with each of the following statements.

	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
At least one professor/instructor at UMass has inspired me to do better than I thought I could.	○	○	○	○
I feel comfortable asking people of other races/ethnicities about their perspectives on racial issues.	○	○	○	○
I learn the most about political/societal issues in discussions with my peers.	○	○	○	○
I am able to challenge others' opinions when I feel they are misinformed.	○	○	○	○
I have found other students on my floor with whom I can discuss intellectual ideas outside of class.	○	○	○	○
I know at least one residence life staff member at UMass who is interested in my well-being.	○	○	○	○
I know at least one professor/instructor at UMass who is interested in my academic development.	○	○	○	○
I am having trouble figuring out how to succeed academically at UMass.	○	○	○	○
I know where to go for help when I need information about UMass.	○	○	○	○
I have found students on my floor with whom I have things in common.	○	○	○	○
I feel very good about my learning experience at UMass so far.	○	○	○	○
I fit in at UMass.	○	○	○	○

OVER>>>>>>>>>>>

On average, how many hours per week do you spend studying or doing homework?

This semester, how many times have you studied or worked on course work with other students who live in your residence hall?

- Never
- Once or twice
- Three to four times
- Five to ten times
- Eleven or more times

How often have you done each of the following this academic year?

	Never	Rarely	Sometimes	Often	Very Often
Socialized with students you met on your floor.					
Studied with students on your floor for a test or exam.					
Worked on homework with students on your floor.					
Discussed ideas from your courses or readings with students on your floor.					
Asked questions in class or contributed to class discussions.					
Had discussions with friends about ideas that your courses stimulated.					
Went to class well-prepared to answer questions or engage in discussion.					
Worked on a paper or project where you had to integrate ideas from various sources.					
Had serious conversations with students on your floor of a different race or ethnicity than your own.					
Had serious conversations with students on your floor whose beliefs, opinions or values are very different from your own.					

How confident are you that you can succeed academically at UMass Amherst?

- Very confident
- Somewhat confident
- Not too confident
- Not at all confident

To what extent have you felt a sense of community at UMass?

- To a very great extent
- To a great extent
- To some extent
- To a little extent
- To a very little extent

How certain are you that you will return to UMass next Fall?

- I am completely certain I will return
- I am fairly certain I will return
- I am not sure
- I am fairly certain I will not return
- I am completely certain I will not return

NOTE: PLEASE ANSWER THIS SET OF QUESTIONS ONLY IF YOU ARE A MEMBER OF A SPECIAL INTEREST RESIDENTIAL PROGRAM (SIRP). Examples include Wellness, Harambee, Nuance and 2 in 20, Kanonhsesne, etc.

What is the name of your SIRP?

_____

For how many semesters have you lived in your SIRP?

- One
- Two
- Three
- Four
- Five or more

This academic year, how many programs did you attend that were sponsored by your SIRP?

- None
- One or Two
- Three or Four
- Five or Six
- Seven or more

Which of the following best describes the extent to which your SIRP met your expectations?

- My SIRP met ALL of my expectations
- My SIRP met MANY of my expectations
- My SIRP met SOME of my expectations
- My SIRP met A FEW of my expectations
- My SIRP met NONE of my expectations

How satisfied are you with your SIRP overall?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

Which of the following best describes your race or ethnicity?

- Bi-racial or Multi-racial
- African, African-American, or Black
- Asian, Asian-American, or Pacific Islander
- Cape Verdean
- Latino, or Hispanic, or Chicano
- Native-American, or N. or S. American Indian, or Alaskan Native
- White, or Caucasian
- Other

What is your GPA?

You are:

- Female
- Male
- Transgender
- Intersex

Class year:

- First-year
- Sophomore
- Junior
- Senior
- 5th Year

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